Kasetsart Journal of Social Sciences 41 (2020) 626–632

Kasetsart Journal of Social Sciences

journal homepage: http://kjss.kasetsart.org

Are customer satisfaction and firm image mediators for environmental corporate strategies and economic performance of Thai green SMEs in food manufacturing?

Pittawat Ueasangkomsate[a,*], Pongsa Pornchaiwiseskul[b]

[a] *Department of Management, Kasetsart Business School, Kasetsart University, Bangkok 10900, Thailand*
[b] *Faculty of Economics, Chulalongkorn University, Bangkok 10330, Thailand*

Article Info

Article history:
Received 17 January 2019
Revised 29 July 2019
Accepted 6 August 2019
Available online 1 December 2020

Keywords:
customer satisfaction,
economic performance,
environmental corporate strategies,
firm image,
SMEs,
sustainability

Abstract

For this research, the relationship between environmental corporate strategies and economic performance is investigated through customer satisfaction and firm image of Thai green SMEs in food manufacturing. A questionnaire was undertaken to gather data from SMEs implementing green supply chain management practices, with there being a total 148 valid returns. Partial least squares structural equation modelling (PLS-SEM) was employed for hypothesis testing. The results of the testing of the measurement model and structural model indicate that they are reliable. The findings reveal that firm image of Thai green SMEs in this industry is a full mediator for the relationship between environmental corporate strategies and economic performance, whilst customer satisfaction does not mediate. This has managerial implications for Thai green SMEs in that they should foster their environmental corporate strategies through firm image, thereby enhancing economic performance.

Introduction

Thailand is one of the world's leading food producers and exporters, known as the "Kitchen of the World", with the annual value of food exports expected to have exceeded 33 billion USD in 2018 (Berendes, 2012; The Federation of Thai Industries, 2018). Regarding the national development strategic plan for Thailand 4.0, between 2017 and 2036, food manufacturing is positioned as one of the industries that will drive the economy forward (Ministry of Industry, 2016). At present, it plays an important role, generating the highest proportion of the gross domestic product (GDP) of the manufacturing sector, at 22.49 percent of the total (2017), worth 28,684 million USD (1 USD = 32.83 THB) (Office of Small and Medium Enterprises Promotion [OSME], 2018). This sector in Thailand is dominated by small and medium enterprises (SMEs), with 125,885 SME food manufacturers representing 99.7 percent of the sectoral total (OSME, 2018). However, SMEs generate only 33.33 percent towards GDP compared to 66.78 percent by large firms (OSME, 2018).

Nowadays, some food manufacturers have applied technology and innovation to the industry for higher productivity, food security, and lower waste from production and consumption (KasikornBank, 2017). Food manufacturers adopting environmental activities engage in more efficient processes, material recycling, water management processes, and eco-products in order to reduce environment impact and maximize resource management (Cuerva, Triguero-Cano, & Córcoles, 2014). Green food manufacturers follow policies aimed at the prevention of pollution and ensuring effective environmental management (Massoud, Fayad, El-Fadel, & Kamleh, 2010).

Environmental corporate strategy involves allocating organizational resource to the incorporation of activities for environmental improvement, thereby protecting the natural environment, whilst also achieving competitive advantage

* Corresponding author.
E-mail address: pittawat.u@ku.th (P. Ueasangkomsate).

https://doi.org/10.34044/j.kjss.2020.41.3.27
2542-3151/© 2020 Kasetsart University.

(Banerjee, 2001; Leonidou, Christodoulides, Kyrgidou & Palihawadana, 2017). There is some evidence from previous studies, showing that environmental corporate strategies positively influence firm performance (Green, Zelbst, Meacham, & Bhadauria, 2012; Leonidou et al., 2017; Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí, 2009; Tang, Walsh, Lerner, Fitza, & Li, 2018). Moreover, previous research has revealed that customer satisfaction and firm image are positive outcomes of effective environmental corporate strategies (Blenkhorn & MacKenzie, 2017; Božac & Tanković, 2015; Garza-Reyes, Kumar, Chaikittisilp, & Tan, 2018; Kaur & Awasthi, 2018; Merli, Preziosi, Acampora, Lucchetti, & Ali, 2018). Economic performance is also positively influenced by customer satisfaction and firm image (Anderson, Fornell, & Lehmann, 1994; Arendt & Brettel, 2010; Sun & Kim, 2013; Williams & Naumann, 2011). To build upon the scientific and practical research, in this study, customer satisfaction and firm image are investigated as mediators for the relationship between environmental corporate strategies and economic performance of Thai green SMEs.

As aforementioned, the study is focused on food manufacturing as this is the most significant manufacturing sector in Thailand, represented as an emerging country for generalization with respect to practices of the industry. It is hoped that the findings from this study can be generalized to other emerging economies, where food manufacturing plays an important economic role. Regarding firm performance, the interest lies in economic performance as measured by indicators drawn from literature, including market opportunity, price, profitability, sales, new customers, and asset utilization, (Choi & Hwang, 2015; Laosirihongthong, Adebanjo, & Choon Tan, 2013; Mitra & Datta, 2014; Perotti, Zorzini, Cagno, & Micheli, 2012; Rao & Holt, 2005). This study provides contributions to fill the gap in literature about the role of customer satisfaction and firm image as mediators for the relationship between environmental corporate strategies and economic performance for green SMEs in food manufacturing. The main reason for focusing on just economic performance in this research is to ascertain whether benefits from a business perspective can be achieved by Thai SMEs in food manufacturing through adopting environmental corporate strategies. If this is found to be the case, then this finding could be taken up as a national strategic policy to persuade other such Thai SMEs about the financial effectiveness of green strategies, thereby giving them incentive to reduce environmental problems. This paper also aims to provide insights for guidelines to green SMEs in relation to whether firms should improve customer satisfaction and firm image in their strategies/policies for enhancing the relationship between environmental corporate strategies and economic performance.

Literature Review

Environmental Corporate Strategies and Economic Performance

Environmental corporate strategies pertain to the kinds of business that firms use as a plan regarding a natural environmental approach to strategic management, thus leading to differentiation to meet an enterprise's goals (Banerjee, Iyer, & Kashyap, 2003). Environmental corporate strategies lead to change in firms, with regards to resource management, exploiting new opportunities for the business (Barreto, 2010; Teece, 2007). Benitez-Amado and Walczuch (2012) showed that proactive corporate environmental strategy has a significant direct impact on economic performance. For example, Google has implemented measures for energy management, which has resulted in lower costs (Benitez-Amado & Walczuch, 2012). Wagner and Schaltegger (2004) revealed that environmental corporate strategy in the context of EU manufacturing has a significant impact on economic performance. Molina-Azorín et al. (2009) carried out a literature review, discovering that there is a positive impact of environment management on economic performance. Aragón-Correa and Sharma (2003) found a link between environmental strategy and economic performance. Siegel (2009) argued that green management practices that complement an organization's business and corporate strategies can enhance economic performance in terms of profitability. Previous studies covering different sectors have indicated the positive influence of environmental corporate strategies on economic performance, according to several aspects. We therefore hypothesize the following:

H1: Environmental corporate strategies positively influence economic performance.

The Mediating Role of Customer Satisfaction and Firm Image

To explore further the relationship between the two components of H1, other variables should be considered and empirically investigated. Here, customer satisfaction and firm image are the focus in this regard. Research by Božac and Tanković (2015) has shown that implementing the various elements of green strategy enhances customer satisfaction. Kaur and Awasthi (2018) have indicated that green supply chain management leads to enhanced customer satisfaction. Garza-Reyes et al. (2018) contended that the implementation of environmental management practices can improve customer satisfaction.

In turn, customer satisfaction leads to improved economic performance of firms across a range of industries including returns on investment and productivity (Anderson et al., 1994). Other researchers also hold that there is a positive relationship between customer satisfaction and economic performance of hotels (Chi & Gursoy, 2009). Merli et al. (2018) revealed that the performance of a beach club's green practices positively influenced customer satisfaction. Conversely, Chen and Tsou (2012) discovered that customer service is a significant factor in enhancing firm performance in Taiwan IT Industry. Moreover, Williams and Naumann (2011) found that there are strong links between customer satisfaction, revenue, stock price as well as earnings per share of Fortune 100 companies. Also, findings by Anderson et al. (1994) and Sun and Kim (2013) support that customer satisfaction leads to profitability. In addition, Mirghafoori, Andalib, and Keshavarz (2017) found that customer satisfaction is linked to enhancing the relationship between green product development as a strategy and economic performance for ceramic tile firms in Iran. Given these outcomes from different sectors, the

following hypothesis is proposed for testing:

H2: Customer satisfaction mediates the influence of environmental corporate strategies on economic performance.

Regarding our research, there are a few studies that have involved investigating the relationship between environmental corporate strategies and firm image. Kaur and Awasthi (2018) discovered that green supply chain management improves firm image through a literature analysis. Integrating sustainability initiatives including green initiatives, green marketing, environmental stewardship and sustainable development within a firm's strategy can improve firm image (Blenkhorn & MacKenzie, 2017). Arendt and Brettel (2010) found that firm image impacts the firm performance of European companies. Other researchers have elicited that improving a firm's image can deliver financial success in the marketplace (Sen, Bhattacharya, & Korschun, 2006). We thus develop our hypothesis based on this linkage as follows:

H3: Firm image mediates the influence of environmental corporate strategies on economic performance.

Based on the hypothesis development provided above, the research framework is presented as shown in Figure 1.

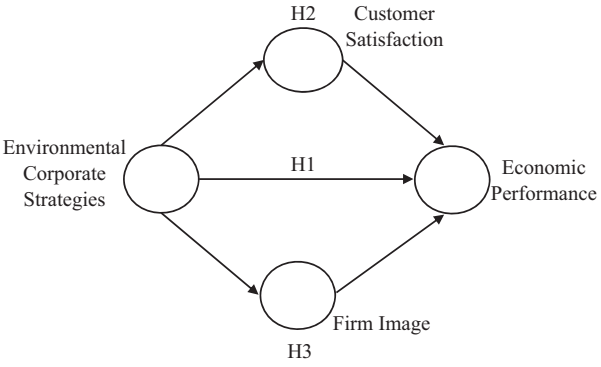

Figure 1 The research framework

Methodology

Development of the Survey Instrument

For this paper, whether customer satisfaction and firm image mediate the relationship between environmental corporate strategies and firm image of Thai green SMEs in food manufacturing is investigated. For development of the survey instrument, one indicator of customer satisfaction and four of firm image were adopted from Laosirihongthong et al. (2013). Regarding environmental corporate strategies, six indicators were taken from the study by Banerjee et al. (2003) for inclusion in this study while six indicators of economic performance were drawn from Rao and Holt (2005), Green et al. (2012), Laosirihongthong et al. (2013), Mitra and Datta (2014) and Choi and Hwang (2015). Reliability analysis was carried out with Cronbach's alpha coefficient for 30 valid questionnaires and this ranged from 0.950–0.974. These were considered clearly acceptable, being higher than 0.7 (Nunnally & Bernstein, 1967). The questionnaires were distributed to collect data from respondents, who mostly were entrepreneurs/managers at management level (more than 50%) of green food manufacturers. They contained indicators of each factor, including customer satisfaction, firm image, environmental corporate strategies, and economic performance. In addition, the questionnaire also gathered information about green SME characteristics. Regarding the indicators for each factor, the respondents were required to respond to statements on a seven-point Likert scale, where 1 indicated the least agreement and 7 the most, based on their opinion. The average scores were divided into seven levels adapted from Vagias (2006): 1) Very low [1.000–1.857]; 2) Low [1.858–2.714]; 3) Quite low [2.715–3.571]; 4) Moderate [3.572–4.428]; 5) Quite good [4.429–5.285]; 6) Good [5.286–6.142]; and 7) Very good [6.143–7.000].

Data Collection and Data Analysis

The data were taken from a study by Ueasangkomsate (2018), with this research focusing only on the information collected on Thai green SMEs in food manufacturing. However, there is no information source for identifying green SMEs in Thailand and thus, in this case, the authors selected 408 enterprises participating in green activities, including eco-products, green productivities, and/or green activities taken from the National Food Institute (as of information during 2008–2016) and the Thailand Greenhouse Gas Management Organization (TGO) (as of 2017) as the scope in this research. These two bodies are responsible for promoting eco-friendly manufacturing with respect to eco-friendly sustainable development and this ensured that the sample only contained Thai green enterprises in food manufacturing. Then, all the selected enterprises were approached to gather the data without probability sampling while the number of employees (1–200) was conducted as a control variable to classify the size of an SME in this research (Ministry of Industry, 2002).

Partial least squares structural equation modelling (PLS-SEM) was used for data analysis through SmartPLS v.3.2.7 software. This was to examine the three hypotheses with respect to the conceptual framework. PLS-SEM is non–parametric technique that is suggested for small sample sizes where distributional assumptions are not required (Hair, Hult, Ringle, & Sarstedt, 2016). The questionnaires were distributed in two ways: 1) email as an online-survey, and 2) by post with a hard-copy. In total, 177 completed surveys were received of which 148 were valid based on the scope, i.e. SMEs, comprising 118 online and 30 by post. Testing the difference of the average scores from the two approaches with a t-test, indicated that there were none in the samples at a significance level of 0.05.

For the measurement model, the SmartPLS was used to evaluate its convergent and discriminant validity. Regarding convergent validity, the factor loading for each indicator should be greater than 0.7, while the value of the average variance extracted (AVE) of each factor should be above 0.5. The composite reliability (CR) should be greater than 0.7, whilst the Cronbach's alpha coefficient should be greater than 0.7, thus indicating the measurement model's convergent

validity is acceptable (Chin, 2010; Hair, Ringle, & Sarstedt, 2011). Each associated indicator should have a loading higher than 0.6, whilst the value of CR and the Cronbach's alpha coefficient for each factor should be higher than 0.8, thus indicating the construct reliability being acceptable (Chin, 2010; Kock, 2013). Regarding discriminant validity, the results based on the Fornell-Larker criterion should reveal that the correlational coefficient of the two factors will be less than one and less than the Cronbach's alpha coefficient. The square root of the AVE for each factor should be higher than the highest correlational coefficient between the two factors in the model, thus reporting the model possesses discriminant validity (Fornell & Larcker, 1981). While the Heterotrait-Monotrait Ratio (HTMT) has been evaluated as a more reliable criterion for discriminant validity, the values of each construct should be less than 0.9 (Hair et al., 2016), which indicates that the model possesses acceptable discriminant validity.

In PLS-SEM, the significance of the relationship among the construct R^2, the effect size f^2, and the Q^2 are measured, presenting how well a structural model performs (Chin, 1998). For assessing f^2, effect size values of less than 0.2 indicate that there is no effect, while values of 0.02, 0.15, and 0.35 respectively, represent small, medium, and large effects (0.02) (Cohen, 1988). Regarding the Q^2 value, values of 0.2, 0.15, and 0.35 indicate that a construct has a small, medium, or large predictive relevance, respectively (Hair et al., 2016).

Results

Thai Green SME Characteristics in Food Manufacturing

The highest number of SMEs in food manufacturing that were included in the sample are situated in the North (40%), followed by the Bangkok Metropolitan Area (17%), Northeast (15%), and East (11%), respectively. The majority of them (61%) have been operating for 3–5 years. The types of SME-food manufacturers involved rice/cereal/flour processing, fishery processing, meat processing (22%, 9% and 9%, respectively). Regarding the export market, almost half of the SMEs export their products mainly to China, Japan, and South Korea (44%), followed by ASEAN (27%).

Regarding the descriptive statistics, the average score for each factor was calculated. The results show that the average score for environmental corporate strategies of green SMEs is 4.789, which puts it in the quite good category. It demonstrates that Thai green SMEs have implemented environmental corporate strategies in their enterprises, but more still needs to be done. The average for customer satisfaction in green SME manufacturing is 5.010, which indicates that this is also in the quite good category, slightly better than for environmental corporate strategies and thus, requiring attention too. In addition, the score for firm image of green SMEs in food manufacturing is 4.866, being situated at a quite good level as well, while economic performance at 4.594 has the least average score, but still belongs in the quite good category. Once again, this indicates that more work needs to be undertaken to improve these two categories.

Measurement Model

This model includes four factors consisting of environmental corporate strategies, customer satisfaction, firm image, and economic performance. Regarding convergent validity, the factor loading for each indicator is higher than 0.7; the minimum value of the AVE is higher than 0.5; the CR is higher than 0.7; and the Cronbach's alpha coefficient is greater than 0.7, thus demonstrating that the measurement model's convergent validity is acceptable (Chin, 2010; Hair, Ringle, & Sarstedt, 2011). Also, each indicator associated with each factor, as shown in Table 1, has a loading higher than 0.6, whilst CR and the Cronbach's alpha coefficient for each factor are higher than 0.8, thus indicating the construct reliability as being acceptable (Chin, 2010; Kock, 2013). Regarding discriminant validity, the results based on the Fornell-Larker criterion and HTMT are presented in Table 2, respectively, indicating that the model possesses acceptable discriminant validity.

Structural Model

The proposed structural model was tested with SmartPLS and bootstrapping analysis was performed with 5,000 subsamples. The results of hypotheses testing regarding the structural model using the data of 148 Thai green SMEs are shown in Table 3. For H1, the findings indicate that the environmental corporate strategies of Thai green SMEs have no influence on economic performance ($\beta = 0.152$, $p > 0.05$), thus not supporting H1. To test H2 and H3, customer satisfaction and firm image are linked to environmental corporate strategies and economic performance. The results with regards to testing the second hypothesis suggest that customer satisfaction does not mediate the influence of environmental corporate strategies on economic performance, thus not supporting H2. In contrast, it emerges that firm image is significantly a full mediator for the link between environmental corporate strategies and economic performance, thereby supporting H3. In sum, the outcomes indicate that a significant effect of environmental corporate strategies on economic performance occurs when firm image is the mediator, as shown in Figure 2.

In PLS-SEM, the significance of the relationship among the construct R^2, the effect size f^2, and the Q^2 are measured, presenting how well a structural model performs (Chin, 1998). For R^2, it was found that 61.8 percent of the variance of economic performance can be explained by other factors, while 61.5 percent of the variance of firm image and 54.6 percent of customer satisfaction can be explained by environmental corporate strategies. The effect size (f^2) indicates that the impact of environmental corporate strategies on firm image is large ($f^2 = 1.595$) as well as that the latter also influences economic performance at a medium level ($f^2 = 0.216$). The Q^2 was estimated by the blindfolding procedure and has a value of 0.473 for economic performance, which is greater than zero (Hair et al., 2016), thus indicating a satisfactory predictive relevance for this structural model.

Table 1 Assessment results of the measurement model

Factors/Constructs	Loading	Cronbach's alpha	CR	AVE
Environmental corporate strategies (ECS)		0.966	0.973	0.855
- ECS1: Firm has integrated environmental issues into environmental strategic processes	0.891			
- ECS2: Firm emphasis on quality and reducing the environmental impact of product and process	0.920			
- ECS3: Firm links environmental objectives with other corporate goals	0.936			
- ECS4: Firm engages in developing products and processes that minimize environmental impact	0.943			
- ECS5: Environmental protection is the driving force behind our firm's strategies	0.960			
- ECS6: Environmental issues are always considered when we develop new products.	0.896			
Customer satisfaction (CS)		1.000	1.000	1.000
- CS1: Increase in customer satisfaction level	1.000			
Firm image (FI)		0.964	0.974	0.904
- FI1: Improvement in product's image	0.937			
- FI2: Improvement in firm's image in the eyes of customers	0.965			
- FI3: Improvement in firm's image in the eyes of suppliers	0.946			
- FI4: Improvement in firm's image in the eyes of employees	0.954			
Economic performance (EP)		0.958	0.967	0.829
- EP1: Increase in new market opportunities	0.896			
- EP2: Product price increase	0.822			
- EP3: Increase in profitability	0.939			
- EP4: Increase in sales	0.959			
- EP5: Acquisition of new customers	0.938			
- EP6: Increase in asset utilization	0.902			

Table 2 Assessment of discriminant validity

(n = 148)

Factors	Fornell-Larker Criterion				HTMT		
	1	2	3	4	1	2	3
1.ECS	**0.925**						
2.CS	0.739	**1.000**			0.751		
3.FI	0.784	0.881	**0.951**		0.812	0.897	
4.EP	0.670	0.693	0.780	**0.910**	0.695	0.704	0.810

Note: The square roots of the AVE values are reported along the diagonal in bold

Table 3 Results of hypothesis testing

Factors	Customer Satisfaction			Firm Image			Economic Performance		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
ECS	.739*		.739*	.784*		.784*	.152	.518*	.670*
	(0.000)		(0.000)	(0.000)		(0.000)	(0.115)	(0.000)	(0.000)
CS							-0.010		-0.010
							(0.944)		(0.944)
FI							0.670*		0.670*
							(0.000)		(0.000)

Note: DE: direct effect; IE: indirect effect; TE: total effect; * $p < .05$; First line indicates the standardized coefficient; Second line indicates p-value in brackets

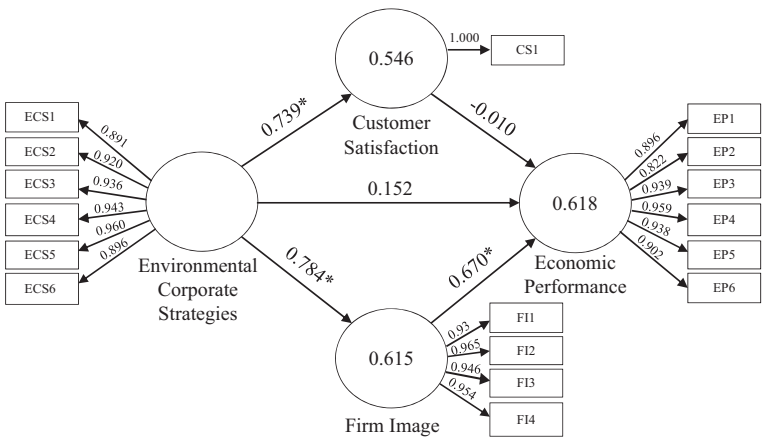

Figure 2 The results of the structural model for SMEs (* $p < .05$)

Discussion and conclusions

This research has involved investigating whether customer satisfaction and firm image mediate the relationship between environmental corporate strategies and economic performance. For the study, survey data were collected from Thai green SMEs in food manufacturing. PLS-SEM was used for the measurement and structural models. Regarding the former, the findings indicate that this model possesses acceptable convergent and discriminant validity.

The results of hypothesis testing based on an SME perspective in food manufacturing reveal that environmental corporate strategies do not influence economic performance directly, whereas firm image is a full mediator that can mediate the linkage between environmental corporate strategies and economic performance. The result is different from previous research that employed firms from many industries. The main reason is probably that customers of Thai green SMEs in food manufacturing do not realize the value of environmental corporate strategies directly and this is why it does not impact to improve economic performance in terms of price, profitability, sales, new customers, asset utilization and market opportunities when compared with enterprises in general. However, despite these findings, there is clear evidence regarding firm image that the customers of Thai green SMEs in the food industry value green practices, which if pursued further could thus lead to enhanced economic performance. The results with regards to firm image are in line with a study by Blenkhorn and MacKenzie (2017), indicating that environmental corporate strategies influence firm image as well as that the latter can improve economic performance (Arendt & Brettel, 2010; Sen et al., 2006). Regarding theoretical implications, the proposed model has been developed as an extension of an earlier one, whereby firm image has been introduced as a mediator between environmental corporate strategies and economic performance.

Moreover, it was found that customer satisfaction of SMEs in food manufacturing does not mediate this relationship. The result also differs from what has been elicited from firms of any size in different industries. Furthermore, the customer service by Thai green SMEs in food manufacturing does not appear to enhance their economic performance. Whilst environmental corporate strategies can improve customer satisfaction, as can be seen in Figure 2, this satisfaction does not have a positive impact on economic performance. That is, customer satisfaction cannot mediate between environmental strategies and economic performance. In general, Thai green SMEs in food manufacturing are not performing at a sufficiently high level in terms of environmental corporate strategies and customer service, and hence, are not reaping the full benefit of enhanced economic performance.

Regarding managerial implications, the study provides evidence for the need for green SMEs in Thailand to recognize the important role of firm image in linking their environmental corporate strategies with economic performance. Improving green SMEs' firm image by enhancing environmental corporate strategies could lead to their obtaining higher economic performance. SMEs should link their environmental objectives with their firm goals, by engaging in developing product and process in food manufacturing that minimizes environmental impact. Accordingly, entrepreneurs and/or managers in SMEs should promote collaboration with their team in relation to policies and strategies aimed at improving firm image, in particular, in the eyes of customers. Moreover, The Thai government could support Thai green SMEs in food manufacturing with financial funding for research and development regarding environmental-friendly product and process while tax incentives are another alternative that the Thai government could offer to those Thai green SMEs paying more attention to the adoption of more environmental focused corporate strategies.

This study has been focused on Thai green SMEs in food manufacturing, 40 percent of which are situated in the North. Hence, the authors propose further research that surveys each region with similar proportions. As this research has focused only on green SMEs, large enterprises in this context could provide different results and hence it is important that they are included in follow up research. It is recommended that practitioners should investigate whether firm image mediates the relationship between environmental corporate strategies and economic performance in other industries, for this would allow for more generalized conclusions to be drawn about this aspect of management in emerging countries.

Conflict of Interest

There is no conflict of interest.

Acknowledgements

The authors would like to thank all respondents regarding the research funded by Kasetsart University Research and Development Institute (KURDI).

References

Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *The Journal of Marketing*, 53–66.

Aragón-Correa, J. A., & Sharma, S. (2003). A contingent resource-based view of proactive corporate environmental strategy. *Academy of Management Review, 28*(1), 71–88.

Arendt, S., & Brettel, M. (2010). Understanding the influence of corporate social responsibility on corporate identity, image, and firm performance. *Management Decision, 48*(10), 1469–1492.

Banerjee, S. B. (2001). Managerial perceptions of corporate environmentalism: Interpretations from industry and strategic implications for organizations. *Journal of Management Studies, 38*(4), 489–513.

Banerjee, S. B., Iyer, E. S., & Kashyap, R. K. (2003). Corporate environmentalism: Antecedents and influence of industry type. *Journal of Marketing, 67*(2), 106–122.

Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of Management, 36*(1), 256–280.

Benitez-Amado, J., & Walczuch, R. M. (2012). Information technology, the organizational capability of proactive corporate environmental strategy and firm performance: A resource-based analysis. *European Journal of Information Systems, 21*(6), 664–679.

Berendes, R. (2012). *Thailand is the kitchen of the world*. Retrieved from https://www.weforum.org/agenda/2012/05/thailand-is-kitchen-of-the-world/

Blenkhorn, D. L., & MacKenzie, H. F. (2017). Categorizing corporate social responsibility (CSR) initiatives in B2B markets: the why, when and how. *Journal of Business & Industrial Marketing, 32*(8), 1172–1181.

Božac, M. G., & Tanković, A. Č. (2015). Corporate identity, green strategy and customer perception. *Change Management: An International Journal, 15*(4), 13–34.

Chen, J. S., & Tsou, H. T. (2012). Performance effects of IT capability, service process innovation, and the mediating role of customer service. *Journal of Engineering and Technology Management, 29*(1), 71–94.

Chi, C. G., & Gursoy, D. (2009). Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. *International Journal of Hospitality Management, 28*(2), 245–253.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research, 295*(2), 295–336.

Chin, W. W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. W., Chin, J., Henseler & H., Wang (Eds.), *Handbook of partial least squares* (pp. 655–690). Berlin, Germany: Springer.

Choi, D., & Hwang, T. (2015). The impact of green supply chain management practices on firm performance: the role of collaborative capability. *Operations Management Research, 8*(3–4), 69–83.

Cuerva, M. C., Triguero-Cano, Á., & Córcoles, D. (2014). Drivers of green and non-green innovation: empirical evidence in Low-Tech SMEs. *Journal of Cleaner Production, 68*, 104–113.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39–50.

Garza-Reyes, J. A., Kumar, V., Chaikittisilp, S., & Tan, K. H. (2018). The effect of lean methods and tools on the environmental performance of manufacturing organisations. *International Journal of Production Economics, 200*, 170–180.

Green Jr, K. W., Zelbst, P. J., Meacham, J., & Bhadauria, V. S. (2012). Green supply chain management practices: impact on performance. *Supply Chain Management: An International Journal, 17*(3), 290–305.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, CA: Sage Publications.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–152.

KasikornBank. (2017). *K SME analysis: Innovation for higher value of Thai food to global market*. Retrieved from https://www.kasikornbank.com/th/business/sme/KSMEKnowledge/article/KSMEAnalysis/Documents/Thai-Food-Innovation.pdf [in Thai]

Kaur, J., & Awasthi, A. (2018). A systematic literature review on barriers in green supply chain management. *International Journal of Logistics Systems and Management, 30*(3), 330–348.

Kock, N. (2013). *WarpPLS 4.0 User Manual*. Laredo, TX: ScriptWarp Systems.

Laosirihongthong, T., Adebanjo, D., & Choon Tan, K. (2013). Green supply chain management practices and performance. *Industrial Management & Data Systems, 113*(8), 1088–1109.

Leonidou, L. C., Christodoulides, P., Kyrgidou, L. P., & Palihawadana, D. (2017). Internal drivers and performance consequences of small firm green business strategy: The moderating role of external forces. *Journal of Business Ethics, 140*(3), 585–606.

Massoud, M. A., Fayad, R., El-Fadel, M., & Kamleh, R. (2010). Drivers, barriers and 10 incentives to implementing environmental management systems in the food industry: A 11 case of Lebanon. *Journal of Cleaner Production, 18*(3), 200–209.

Merli, R., Preziosi, M., Acampora, A., Lucchetti, M. C., & Ali, F. (2018). The impact of green practices in coastal tourism: An empirical investigation on an eco-labelled beach club. *International Journal of Hospitality Management*, *77*, 471–482.

Ministry of Industry (2016). *National industry development strategic plan for Thailand 4.0*. Retrieved from http://www.oie.go.th/sites/default/files/attachments/industry_plan/thailandindustrialdevelopmentstrategy4.0.pdf [in Thai]

Ministry of Industry. (2002). *Definition of SMEs*. Retrieved from http://www.sme.go.th/upload/mod_download/%E0%B8%99%E0%B8%B4%E0%B8%A2%E0%B8%B2%E0%B8%A1%20SMEs.pdf [in Thai]

Mirghafoori, S. H., Andalib, D., & Keshavarz, P. (2017). Developing green performance through supply chain agility in manufacturing industry: A case study approach. *Corporate Social Responsibility and Environmental Management, 24*(5), 368–381.

Mitra, S., & Datta, P. P. (2014). Adoption of green supply chain management practices and their impact on performance: an exploratory study of Indian manufacturing firms. *International Journal of Production Research, 52*(7), 2085–2107.

Molina-Azorín, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green management and financial performance: a literature review. *Management Decision, 47*(7), 1080–1100.

Nunnally, J. C., and Bernstein, I. H. (1967). *Psychometric theory*. New York, NY: McGraw-Hill.

Office of Small and Medium Enterprises Promotion. (2018). *SMEs White Paper 2018*. Retrieved from http://www.sme.go.th/th/download.php?modulekey=215&cid=0 [in Thai]

Perotti, S., Zorzini, M., Cagno, E., & Micheli, G. J. (2012). Green supply chain practices and company performance: the case of 3PLs in Italy. *International Journal of Physical Distribution & Logistics Management, 42*(7), 640–672.

Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management, 25*(9), 898–916.

Sen, S., Bhattacharya, C. B., & Korschun, D. (2006). The role of corporate social responsibility in strengthening multiple stakeholder relationships: A field experiment. *Journal of the Academy of Marketing science, 34*(2), 158–166.

Siegel, D. S. (2009). Green management matters only if it yields more green: An economic/strategic perspective. *The Academy of Management Perspectives*, *23*(3), 5–16.

Sun, K. A., & Kim, D. Y. (2013). Does customer satisfaction increase firm performance? An application of American Customer Satisfaction Index (ACSI). *International Journal of Hospitality Management, 35*, 68–77.

Tang, M., Walsh, G., Lerner, D., Fitza, M. A., & Li, Q. (2018). Green Innovation, Managerial Concern and Firm Performance: An Empirical Study. *Business Strategy and the Environment, 27*(1), 39–51.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319–1350.

The Federation of Thai Industries. (2018). *Industrial review*. Retrieved from https://www.fti.or.th/2016/download/technical/Industrial_Review_April_2561_1197.pdf [in Thai]

Ueasangkomsate, P. (2018). *Green supply chain management practices and performance of SMEs* (Research report). Bangkok, Thailand: Kasetsart University. [in Thai]

Vagias, W. M. (2006). *Likert-type scale response anchors*. Clemson, SC: Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management, Clemson University.

Wagner, M., & Schaltegger, S. (2004). The effect of corporate environmental strategy choice and environmental performance on competitiveness and economic performance: an empirical study of EU manufacturing. *European Management Journal, 22*(5), 557–572.

Williams, P., & Naumann, E. (2011). Customer satisfaction and business performance: a firm-level analysis. *Journal of Services Marketing, 25*(1), 20–32.