Environmental proactivity, competitive strategy, and market performance

Nguyen, Nguyen Phong; Adomako, Samuel

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Environmental Proactivity, Competitive Strategy and Market Performance: The mediating Role of Environmental Reputation

Nguyen Phong Nguyen[1], Samuel Adomako[2]

[1]School of Accounting, University of Economics Ho Chi Minh City, Vietnam
nguyenphongnguyen@ueh.edu.vn

[2] School of Management, University of Bradford, Bradford, United Kingdom:
S.Adomako@bradford.ac.uk

Abstract
This article examines the impact of small and medium-sized enterprises' (SMEs') proactive environmental strategy on market performance through the mediating mechanism of environmental reputation. In addition, we investigate the potential moderating role of competitive strategies on the environmental reputation-market performance nexus. Data were collected from 223 SMEs. Using the hierarchical multiple regression analysis, the results show that a proactive environmental strategy positively enhances environmental reputation. Also, the influence of proactively environmental strategy on market performance is mediated by environmental reputation. In addition, our findings show the relationship between environmental reputation and market performance is greater for firms that adopt the differentiation strategy but not significant for firms adopting the low-cost and integrated strategies. Our study offers several theoretical and practical implications.

Keywords: competitive strategy; environmental reputation; environmental strategy; market performance; Ghana; SMEs

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1. Introduction

The increasing global environmental problems such as climate change have propelled stakeholders to demand solutions for firms' impact on the natural environment. In response, many firms have developed an environmental strategy to voluntarily address the environmental impacts of their economic activities (Bansal & Song 2017; Dou, Su, & Wang, 2019). When firms

exhibit proactive attitudes and a strong commitment to environmental management, they stand to gain a good reputation and image which translates into competitive advantages (Darnall, Henriques & Sadorsky, 2010; Yang, Jiang, & Zhao, 2019). Environmental proactivity reflects to the extent of environmental protection initiatives embedded within a firm's strategic planning process (Chan, 2010).

Within the realm of environmental strategy research, researchers have pursued a diverse set of objectives. These include the examination of factors that predict environmental innovation (Horbach, 2008; Rothenberg, & Zyglidopoulos, 2007; Wagner, 2013), the influence of environmental strategy on market, and financial performance (Adomako, Ning, & Adu-Ameyaw, 2020; Liu, Guo, & Chi, 2015; Quan, Wu, Li, & Ying, 2018), and the identification of that moderate the relationship environmental strategy and performance (Adomako, et al., 2019; Amankwah-Amoah, Danso, & Adomako, 2019; Aragón-Correa & Sharma, 2003). Overall, knowledge accumulation around environmental proactivity in firms has been substantial.

However, the body of existing literature on environmental strategy still lacks theoretical precision. First, the empirical evidence has generally highlighted the positive impact of proactive environmental strategy on performance outcomes. Yet, the mechanisms through which proactive environmental strategy positively influence firm performance lacks theoretical clarity. Second, empirical scholarship has shown the benefits of environmental reputation (Delmas & Blass, 2010; Morales-Raya, et al., 2019). For example, it has been demonstrated that a firm's environmental reputation can attract talented employees (Reinhardt, 1999), increase the consumer retention rate (Biloslavo & Trnavčevič, 2009) and promote strategic alliances (Norheim-Hansen, 2015). While these studies have highlighted the importance of environmental reputation, we still lack a good understanding of the impact of environmental reputation on firm

outcomes under different firm competitive strategies. The lack of attention to understanding the conditions under which environmental reputation has a positive or negative influence on firm outcomes is particularly surprising given the benefits generated by environmental reputation.

Deriving insights from the Natural Resource-Based View (NRBV) (Hart, 1995), we examine the impact of proactive environmental strategy on market performance through the mediating mechanism of environmental reputation. In addition, this paper examines the moderating effects of competitive strategies (low cost, differentiation, and integrated strategies) on the relationship between environmental reputation and SMEs' market performance to enhance our understanding of the internal firm conditions that influence this relationship. A sample of 223 SMEs located in Ghana, a fast-developing African country, is the setting of our study. The influence of proactive environmental strategy has primarily been examined in the context of developed countries; thus, investigating SMEs' proactive environmental strategy in other cultural and institutional contexts can help in better understanding its impact in different environments and thereby enhance the generalizability of findings.

Our study aims to make three important contributions to strategy and environment literature. First, this study extends the literature by demonstrating the underlying mechanism through which a proactive environmental strategy fosters market performance. The second contribution is the use of "competitive strategy" variables as moderators of the environmental reputation–SME performance relationship to gain a better understanding of the conditions under which environmental reputation has a positive impact on market performance. Third, this study focuses on the understudied but increasingly important context of Ghana to demonstrate how environmental strategies of Ghanaian SMEs contribute to their market performance. The predominant focus on developed country firms in environmental issues calls into question the

generalizability of theories and findings. The Ghanaian context is significantly different from developed countries in terms of economic, financial, and infrastructure development. The Ghanaian government has also introduced new initiatives to reward firms based on their financial performance to achieve the goal of raising the country's economic condition (Adomako, 2020; Julian & Ofori-Dankwa, 2013). This suggests that our dependent variable, SMEs' market performance, is appropriate for our study context.

The paper proceeds as follows. It first introduces the research model to theoretically ground the study and develop the hypotheses. Next, we discuss the research design and follow it with an explanation of our data analysis and results. In the concluding section, we discuss the findings and their implications.

2. Theoretical background and hypotheses

2.1 Natural resource-based view and proactive environmental strategy

The resource-based view (RBV) of the firm (Barney, 1991; Wernerfelt, 1984) considers a variety of resources and capabilities as sources of competitive advantage. Whiles the RBV provides ample insights about sources of a firm's competitive advantage, it neglects the interaction between the firm and its natural environment (Hart, 1995). The NRBV (Hart, 1995) contends that pollution prevention, product stewardship, and sustainable development constitute the three main strategic capabilities of a firm. This is because the natural environment creates a serious impediment to organizations' efforts to create a sustainable competitive advantage. These capabilities have different environmental driving forces that build on varied key resources to generate a competitive advantage. For example, a firm's capability to prevent pollution could lead to cost reduction whiles firms can integrate stakeholders in the product design and development process which can create a competitive advantage through strategic pre-emption

(Hart, & Dowell, 2011). Finally, a firm's sustainable development strategy considers production that ensures the maintenance of the environment and focuses on the economic and social impacts of its activities. Therefore, for firms to achieve sustained competitive advantage, they must integrate environmental strategy into the overall corporate strategy.

A firm's proactive environmental strategy reflects the degree to which the firm integrates environmental protection initiatives into its overall strategic planning process (Aragón-Correa, eta l., 2008; Chan, 2010). Firms adopting environmental strategy exhibit environmental behaviors such as reducing waste and emission, product life-cycle analysis, and employee training. Two strands of environmental strategies have adopted by firms: proactive and reactive strategies (Aragón-Correa, 1998; Yang, Jiang, & Zhao, 2019). Firms that adopt the reactive environmental strategy only respond and comply with environmental regulations whilst proactive environmental strategy refers to a voluntary environmental orientation that beyond the regulatory compliance have a positive. Firms employing proactive environmental strategy tend to continually learn to integrate quality environmental management into their overall strategic planning (Buysse, & Verbeke, 2003; Yang, Jiang, & Zhao, 2019).

The question about whether a proactive environmental strategy predicts performance has produced mixed results. First, earlier studies show that embarking on a proactive environmental strategy could add to the cost of production and reduce performance in the short-term (Cordeiro & Sarkis, 1997; Palmer, Oates, & Portney, 1995). However, recent studies indicate that a firm's proactive environmental strategy helps to cut costs and helps differentiate the firm from its competitors which in turn boosts performance (Aragón-Correa, eta l., 2008; Leonidou, Katsikeas, & Morgan, 2013). Therefore, it is critical to examine the mechanisms through which proactive environmental strategy influence market performance

2.3 Proactive environmental strategy, environmental reputation, and market performance

In this study, we contend that a proactive environmental strategy should foster an environmental reputation. This is because the more stakeholders hold the firm in high esteem for its environmental proactivity, the better its reputation (Morales-Raya, 2019). For example, for firms to enhance their environmental reputation, they shape stakeholders' perception of their contribution to solving environmental problems. Environmental reputation is defined as ''the overall estimation in which a company is held by its constituents'' Fombrun (1996, p. 37). Through the participation of highly visible environmental practices, firms tend to instill in stakeholders the impression that they have truly environmentally proactive programs to protect the natural environment (Bansal & Clelland, 2004; Berrone et al., 2009). Given that reputation reflects the integration of individual impressions (Highhouse et al., 2009; Morales-Raya, 2019), this study suggests that firms' environmental proactivity that demonstrates external high visibility will positively relate to environmental reputation. Besides, since a proactive environmental strategy is externally oriented which seeks to protect the environment and reduce environmental problems (Yang, Jiang, & Zhao, 2019), the greater the firm likely becomes proactive in environmental issues, the more stakeholders will view the firm in high regard. This may be reflected in consumers' attention to environmental footprints of the products they purchase. Thus, firms that adopt a proactive environmental strategy are thus more likely to fulfill the environmental demands of stakeholders. Given that the adoption of a proactive environmental strategy gives stakeholders more information about the firm's environmental commitment, organizations that strategically adopt visible environmental practices are likely to develop a stronger environmental reputation. Based on the foregoing argument, this study suggests that:

H1: *Proactive environmental strategy is positively related to environmental reputation*

In addition to the relationship between proactive environmental strategy and environmental reputation, this paper considers if environmental reputation mediates the relationship between proactive environmental strategy and market performance. Whiles previous studies have investigated the influence of environmental proactivity on firm performance (Adomako, et al., 2019; Chan, 2005), it is unclear how environmental reputation serves as a mediating mechanism of this relationship. In the field of environmental management, environmental reputation is considered a predictor of environmental reporting activities (Dixon, Mousa, & Woodhead, 2005). Environmental proactivity generates a higher reputation by stakeholders which helps firms to obtain regulatory (Daddi, et al., 2014; Wätzold, et al., 2001), and monetary incentives (Boiral, et al., 2018). Firms can show their concerns about the environment through proactive environmental activities such as environmentally friendly product offerings, recycling, and activities that solve environmental problems. These activities tend to enhance environmental reputation in the long run (Brammer & Millington, 2005; Williams & Barrett, 2000).

Whiles environmental proactivity ensures a greater environmental reputation, it is also the case that environmental reputation can enhance the firm's market performance (Cordeiro, & Sarkis, 1997; Pujari, 2006). First, a good environmental reputation generates positive customer responses because customers tend to use this information to capture the underlying value of the product. Given that customers' positive responses generate greater loyalty among customers (Hansen, Samuelsen, & Silseth 2008), this is likely to increase the market performance of the firm. Second, a greater environmental reputation helps attract and retain customers who tend to value their association with the firm's goodwill (Roberts & Dowling 2002). This is likely to facilitate the promotion of the firm's products and services. Collectively, firms benefit from a

greater environmental reputation which contributes to overall performance. Thus, we propose that:

> **H2**: *Environmental reputation mediates the relationship between proactive environmental strategy and market performance*

2.5 Competitive strategy as a contingency variable

According to Porter (1980), there are key business-level strategies that firms can employ to secure, defend, or confront rivals in the marketplace. These include cost leadership, differentiation, and integrated cost leadership/differentiation (Hill, Schilling & Jones, 2015). Research in strategy has shown that Porter's conceptualization of competitive strategies has a strong influence on firms' outcomes (Acquaah, 2007; Lillis, & Sweeney, 2013). As firms from emerging markets begin to compete on the global stage, their ability to formulate and implement coherent competitive strategies is likely to define their successes. The strategies of cost leadership and differentiation define the dominant logic of competitive strategy, which are considered strategic weapons that define the market scope (Chrisman et al., 1988; Grant, 1998). These strategies reflect how a firm develops a competitive advantage in each industry relative to its competitors. In the next section, we advance the argument that the effect of environmental reputation on market performance is contingent on the implementation of Porter's generic strategies: low-cost, differentiation, and integrated low-cost differentiation strategies.

2.5.1 Low-cost strategy

Porter's (1980) thesis suggests that firms require different sets of resources and capabilities to implement different competitive strategies. The implementation of low-cost strategy emphasizes operational efficiency by aggressively pursuing efficient-scale facilities, cost reduction, overhead cost control, and the minimization of cost in R&D, service, sales force, and advertising (Porter, 1980). The strategy literature highlights the importance of pursuing competitive business

strategies especially for firms implementing proactive environmental strategy (Adomako et al., 2019; Figge et al., 2002). However, previous studies suggest that the implementation of a proactive environmental strategy is associated with high costs (Montabon et al., 2007). Therefore, the question about whether firms with a greater environmental reputation should pursue a low-cost strategy becomes crucially critical. In the case of a developing country like Ghana, there is a large volume of low-income earners which puts them in the price-sensitive bracket. With greater environmental reputation, firms pursuing a low-cost strategy is likely to enhance buyer retention through low prices (Porter, 1997), which can potentially impact on market performance. This puts firms with a high environmental reputation at a good advantage to pursue a low-cost strategy.

However, despite the advantages associated with the low-cost strategy, its implementation requires huge resources such as a secured source of raw materials, low-cost distribution channels, and access to finance to increase the efficiency of operations. Given that most firms in developing countries struggle to access resources for business activities, it is reasonable to argue that firms must rely on other resources such as their reputation to implement the low-cost strategy to achieve performance. Based on the foregoing argument, we suggest that:

H3a: The positive effect of environmental reputation on market performance will be stronger for firms pursuing a low-cost strategy than for firms that do not pursue a low-cost strategy

2.5.2 Differentiation strategy

Firms that implement the differentiation strategy creates and provides products or services that are perceived by customers as unique and valuable as compared to products and services of other competing firms. The firm creates this impression by offering innovative, quality, and durable products. Ostensibly, firms with greater environmental reputation can offer the differentiation

strategy to boost performance because a greater reputation helps to attract and retain customers who value their association with the reputation of the firm. These customers tend to pay premium prices for the firm's products and services (Shapiro, 1983). Environmental campaigns and various marketing strategies are used by firms to enhance the perceptions in the minds of prospective customers that the firm's products and services are superior to those of its competitors. Given that empirical evidence supports that reputation positively impacts customer loyalty (Helm, Eggert & Garnefeld, 2010) and customers' willingness for pay a premium price (Keh & Xie 2009), it allows firms pursuing the differentiation strategy to build brand and customer loyalties and create entry barriers for its rivals. This suggests that firms with a greater reputation can implement the differentiation strategy as loyalties obtained from reputation enable the firms to charge premium prices for its products or services. Given the price-inelastic nature of demand, and this can be translated into higher profit margins. Besides, the implementation of the differentiation strategy requires greater capabilities and resources such as environmental reputation (Porter, 1980). Therefore, the performance benefits of environmental reputation are likely to be greater for firms pursuing the differentiation strategy.

H3b: The positive effect of environmental reputation on market performance will be stronger for firms pursuing the differentiation strategy than for firms that do not pursue the differentiation strategy

2.5.3 Integrated strategy

Porter (1980) suggests that a firm cannot successfully pursue both the low-cost and differentiation simultaneously because the cost associated with the differentiation strategy is enormous. This suggests that to achieve superior performance, a firm must make a clear choice between the low-cost and the differentiation strategy, otherwise the firm could be stuck in the middle and thus leads to low performance. Whiles Porter's thesis has received strong empirical

support (Acquah, 2007; Lechner, & Gudmundsson, 2014; Robinson & Pearce, 1988), some empirical support exists to highlight the possibility of a firm to simultaneously pursue both the low-cost strategy and the differentiation strategy (i.e., the integrated strategy) (Adomako et al., 2019; Li & Li, 2008; Spanos, Zaralis, & Lioukas, 2004).

This study argues that the impact of environmental reputation on market performance would be stronger for firms pursuing an integrated strategy than firms that do not pursue the integrated strategy. With a greater level of environmental reputation, firms create a neutral ground for facilitate the promotion of a firm's products and services to achieve higher performance. For example, the positive perceptions held by the firm's customers increase their loyalty to the firm and this can be used to reinforce a strong cost position and brand image through investments in environmental practices resulting in sustainable greater market share and economies of scale (Adomako et al., 2019). Besides, the implementation of the integrated strategy tends to focus on keeping costs low and meet or exceed customers' expectations on quality and price (Thompson & Strickland, 2001). Therefore, firms should possess the resources and capabilities that would help it offer superior quality products at a low cost. This suggests that firms pursuing an integrated strategy require resources such as an environmental reputation to achieve performance. Therefore, this study proposes that:

H4c: The positive effect of environmental reputation on market performance will be stronger for firms pursuing an integrated strategy than for firms that do not pursue the integrated strategy.

3. Method

3.1 Sample and data collection

The data were collected in two waves using face-to-face questionnaire administration such that information on all independent and control variables was collected in wave 1, whereas information on the dependent variable was collected six months later in wave 2. The first wave

targeted a sample of 1,050 firms randomly selected from the approximately 95,000 registered companies in the Ghana Company Register. The following sampling criteria were used to select the 1,050 firms for the study: (1) manufacturers of physical products; (2) firms owned and controlled by individual entrepreneurs or group of entrepreneurs; (3) firms that were not part of any company group; and (4) employing a maximum of 250 full-time employees.

To obtain information about the variables of interest, we sent letters to the chief executive officers (CEOs) of the selected companies explaining the purpose of the study. To ensure a high response rate and accurate information, we promised the CEOs a summary of the results of the study if they added their company's addresses. Two weeks after the letters were sent, one of the authors personally visited the companies and gave the questionnaires to the CEOs and agreed on the due date to collect the completed questionnaires. After two visits to the headquarters of the companies, 241 responses were received. We discarded 12 questionnaires due to missing values. Thus, 229 complete responses were obtained in wave 1 (21.80%).

Since using single-source information is often associated with common method bias (Podsakoff, MacKenzie, & Podsadoff, 2003), the finance managers/chief accountants were approached with a questionnaire in person to elicit information on market performance. It was detected that 7 companies had no finance managers/chief accountants. These companies were excluded from the survey. Overall, we obtained 223, representing a 21.04% response rate. The average firm size was 20 full-time employees and the average firm age was 14 years.

Non-response bias was investigated by splitting the data into two: respondents and non-respondents (Armstrong & Overton 1977; Rogelberg & Stanton 2007) using firm age, size, and CEO age. A comparison of the two groups found no substantial differences. Thus, non-response bias does not substantially influence the data used.

3.2 Measure of Constructs

All measures were derived from previously validated items and were captured on a seven-point Likert-type scale with anchors ranging from 1 = strongly disagree to 7 = strongly agree.

Proactive environmental strategy. Five items from Sharma and Vredenburg (1998) were used to capture proactive environmental strategy. CEOs were asked to indicate how their firms have performed in terms of environmental practices over the past 3 years.

Environmental reputation. Previous studies have measured environmental reputation using surveys that capture expert opinions on CSR, academics, and environmentalists (Morales-Raya, Martín-Tapia, & Ortiz-de-Mandojana, 2019; Tang et al., 2012). Given that these scores are not available in a developing country context such as Ghana, we adapted the environmental reputation items from previous studies that capture corporate reputation (Fombrun, Gardberg, & Sever, 2000; Rettab, Brik, & Mellahi 2009). The items were reworded to reflect the good environmental reputation of each firm. The questions that measure the environmental reputation construct were answered by the CEO of each company.

Competitive strategy. Porter's (1980) generic competitive strategies were captured using 13 items from Acquaah (2007). CEOs were asked to indicate the extent to which their firms had utilized competitive strategies from 2016 to 2019 on a seven-point Likert scale (1 = not at all to 7 = to an extreme extent). Based on a factor analysis, two factors were obtained: low-cost, and differentiation strategies. A low-cost strategy was measured with six items whilst the differentiation strategy was captured with seven items. To create an integrated strategy (i.e. a combination of low-cost and differentiation strategies), we used a categorical variable (Acquaah, 2007). Thus, firms whose combined mean for both the low-cost strategy and differentiation strategy was larger than the mean of each strategy were taken to be pursuing an integrated strategy

and were coded 1, whilst others were coded 0.

Market performance. Following Homburg, Workman, & Jensen (2002), we collected self-reported market performance data from finance managers of each firm. Finance managers/chief accountants were asked to compare their companies' their industry rivals on a scale ranging from "1" = "below expectation" to "7" = "exceeded expectation".

Control variables. We included several control variables that have been shown by previous research to have a potential impact on firm performance outcomes (Peng & Luo, 2000; Robinson & Sexton, 1994). *Firm size* was measured with the number of full-time employees, and *firm age* was captured as the number of years the business has operated since its first sales. The manufacturing industry was divided into two and was coded as 1=high-technology industries and 0= Low-technology industries. Finally, we controlled *founder/CEO age* and *education* ("1" = "high school," "2" = "higher national diploma," "3" = "bachelor's degree," "4" = "master's degree," and "5" = "doctoral degree").

4. Analyses

4.1 Measure validation

A confirmatory factor analysis (CFA) was performed using the maximum likelihood approach in LISREL 9.30 to assess reliability and validity for the multi-item constructs. The chi-square (χ^2) test and other fit indices were used to assess the model fit. To control for common method variance (CMV), we used two approaches. First, followed the procedure suggested by Carson (2007) and estimated two combined models in CFA with all multi-item constructs together with a common factor modeled to load on all items. Specifically, we estimated two competing models: Model 1 involved a trait-only model where each indicator loaded on its respective latent factor. The results in Model 1 indicate good model fit: χ^2/d.f.=416.20/269 (1.55); RMSEA=0.05;

NNFI=0.95; CFI=0.96; SRMR = 0.07. Model 2 estimated a trait-method which involved a common factor linking all the indicators. The results in Model 2 show adequate model fit: $\chi 2$/d.f. = 569.11/289 (1.97); RMSEA = 0.05; CFI = 0.97; NNFI = 0.96; SRMR = 0.05. A comparison of the two models shows that Model 2 is not substantially better Model 1.

Second, we used a marker test (Lindell & Whitney, 2001) to assess the correlation between the marker variable and the key constructs. The item ‘‘we finance start-up business activities dedicated to international operations’’ was used as a marker item. This item has no conceptual ties with any of the key constructs in the study. The results of the marker test show nonsignificant correlations ranging from −0.01 to 0.04. Collectively, the results of the two analyses show common method variance does not influence the findings reported in this study. Besides, the factor loadings for each multi-item construct from the trait-only model are significant at 1% level.

4.2 Convergent and discriminant validity assessment

Table 1 presents the reliability and validity of each construct. The composite reliability (CR) and average variance extracted (AVE) are all above 0.60 and 0.50 respectively. Besides, the percentages accounted for by the traits measured are greater than the variance explained by common method factor and error. The CFA results provide sufficient fit between the hypothesized measurement model and the observed. Also, all factor loadings exceeded the threshold of 0.70. Thus, we established convergent validity (Fornell & Larcker, 1981). To establish the discriminant validity of the constructs, we compared the six-factor model with alternative models. The results show that the six-factor model provides an excellent fit than any other model. We also found that the correlation between each pair of constructs is less than the

square root of AVE for each construct, supporting discriminant validity (Fornell & Larcker, 1981).

Table 1: Constructs and measurement items: reliability and validity tests

Item description	Loadings (t-values)	CR	AVE	Trait	Method	Error
Proactive Environmental Strategy		0.84	0.63	0.77	0.01	0.20
In the past three years……						
Our company has reduced wastes and emissions from operations	0.86(1.00)					
Our company has company undertaken actions to reduce the environmental impact of its products	0.64 (7.80)					
Our company has undertaken actions to reduce the risk of environmental accidents, spills, and releases	0.75 (8.21)					
Our company has established partnerships to reduce environmental impact	0.77(8.89)					
Our company has undertaken actions to reduce environmental impact	0.80(9.25)					
Environmental reputation		0.81	0.59	0.75	0.01	0.24
In general, our organization has a good environmental reputation	0.90(1.00)					
We are widely acknowledged as an environmentally friendly organization	0.96 (28.18)					
This organization has a reputation for selling high-quality environmentally friendly products and services	0.92 (25.11)					
Our company has a reputation for complying with all environmental laws in Ghana	0.88(18.18)					
Our salespersons and employees have the reputation of providing full and accurate eco-product information to all customers	0.78(15.11)					
Our company is known for giving active support to environmental programmes in Ghana	0.77(14.78)					
Low-cost strategy		0.89	0.71	0.85	0.00	0.15
We offer a broad range of products/services	0.84(1.00)					
We focus on operating efficiency	0.79 (13.36)					
We offer competitive pricing for products/services	0.94 (15.84)					
We control operating and overhead costs	0.95(16,22)					
We use innovation in production processes or service offerings	0.92(14.08)					
We forecast market growth in sales	0.91(13.99)					
Differentiation strategy		0.82	0.60	0.77	0.11	0.11
We develop new products/service offerings	0.89(1.00)					
We upgrade or refine existing products/services	0.90(16.48)					
We focus on products or services for high-priced market segments	0.72 (8.81)					
We improve existing customer service	0.74(9.10)					
We use innovation in the marketing of products/services	0.77(10.34)					
We advertise and promote products/services	0.88(14.45)					
We build brand and company identification	0.87(14.23)					
Market performance		0.77	0.56	0.69	0.02	0.28
Achieving customer satisfaction.	0.78(1.00)					
Providing value for customers	0.64 (7.52)					
Attaining desired growth	0.75 (8.25)					
Securing desired market share.	0.77(9.11)					
Successfully introducing new products.	0.80(12.13)					
Keeping current customers	0.82(13.22)					
Attracting new customers	0.87(15.10)					

Note: t-values are in parentheses. CR=Cronbach's alpha; AVE= Average variance extracted; Trait= Percentage of variance explained by constructs; Method= Percentage variance explained by common method factor; and Error= Percentage of variance explained by error

Table 2: Descriptive statistics and correlations

	Variable	1	2	3	4	5	6	7	8	9	10	11
1.	Firm size (Employees)											
2.	Firm age	0.05										
3.	CEO age	0.02	0.04									
4.	CEO education	-0.01	0.05	0.01								
5.	Industry	-0.05	-0.04	-0.06	0.08							
6.	Low-cost strategy	-0.10	-0.09	0.10*	0.15*	-0.11						
7.	Differentiation strategy	0.06	0.03	-0.08	0.15*	0.20**	0.19**					
8.	Integrated strategy [b]	-0.03	-0.06	-0.04	-0.11	-0.08	0.13*	0.20**				
9.	Proactive environmental strategy	0.14*	0.11	0.12	0.25**	0.16*	0.07	0.13*	0.11			
10.	Environmental reputation	0.10	0.05	0.14*	0.19**	0.15*	0.05	0.29**	0.06	0.39**		
11.	Market performance	-0.04	-0.05	0.11	0.04	0.13*	0.08	0.10	0.006	0.19**	0.13*	
	Mean	19.58	14.03	41.71	2.95	0.82	4.85	4.53	0.44	4.54	4.53	4.61
	Standard deviation	15.45	9.23	9.20	1.19	0.39	1.26	0.82	0.51	1.36	1.20	1.88

[b]Dummy variable coded a 1 if both low-cost strategy and differentiation strategy were greater than their respective means and coded 0 if otherwise.
*p<0.05; **p<0.01.

4.3 Results

The hierarchical regression was used to estimate the models. Before performing the regression analysis, the variables were mean-centered (Aiken & West, 1991) to rule out potential multicollinearity. In addition, the potential effect of multicollinearity was investigated using the correlation matrix (Table 2). The evidence obtained indicates that multicollinearity was not a concern in this study.

Table 2 presents the mean, standard deviations, and correlations for all variables. Table 3 presents the results of hierarchical regression analyses. Table 4 presents the subgroup analysis of the moderating effect of competitive strategy.

Model 1 contains the control variables while Model 2 the contingency variables. Hypothesis 1 proposed that proactive environmental strategy positively relates to environmental reputation. The results in Model 3 (Table 3) show that Hypothesis 1 received support ($\beta = 0.33$, $p<0.01$). Although, we did not hypothesize the direct relationship between environmental and market performance, Model 5 (Table 3) indicates environmental reputation was positively related to market performance ($\beta = 0.18$, $p<0.01$).

Hypothesis 2 predicted that the effect of proactive environmental strategy on market performance is mediated by environmental reputation. To test the mediating effect of environmental reputation, we followed the Baron and Kenny's (1986) procedure. First, if mediation is established, the effect of proactive environmental strategy on environmental reputation would be significant. Second, the effect of environmental strategy on market performance to be would nonsignificant when environmental reputation is added to the regression equation. As shown in Model 3 (Table 3), proactive environmental strategy positively relates to market performance ($\beta = 0.19$, $p<0.01$). In addition, as shown in Model 4 (Table 3), proactive environmental strategy positively relates to the mediating variable (environmental reputation) ($\beta = 0.33$, $p<0.01$). Moreover, environmental reputation is positively associated market performance ($\beta = 0.18$, $p<0.01$). The results also show that when the mediating variable added to the regression equation, the effect of the independent variable on the dependent becomes insignificant ($\beta = 0.04$, *ns*). These results support the conditions of mediation (Baron & Kenny 1986). These findings offer support for Hypothesis 2.

Table 3: Results of direct and indirect effects (N = 223)

	Model 1 Market performance	Model 2 Market performance	Model 3 Market performance	Model 4 Environmental reputation	Model 5 Market performance
Control variables					
Firm size	-0.02	-0.02	-0.03	0.06*	-0.04
Firm age	-0.04	-0.04	-0.04	0.08*	-0.04
CEO age	0.08*	0.08*	0.09*	-0.03	0.08
CEO education	0.04	0.04	0.04	0.06	0.05
Industry (1=high technology; 0=low technology)	0.14**	0.14**	0.15***	0.09*	0.14**
Low-cost strategy		0.11*	0.11*	0.06*	0.12*
Differentiation strategy		0.14**	0.14**	0.08*	0.14**
Integrated strategy		0.08*	0.09*	0.10*	0.09*
Main effect					
Proactive environmental strategy			0.19***	0.33***	0.04
Mediating effect					
Environmental reputation					0.18***
Model fit statistics					
F-value	2.70	3.56	3.79	2.89	4.53
R^2	0.10	0.16	0.19	0.15	0.22
Adj. R^2	0.08	0.13	0.14	0.10	0.17

* $p<0.10$; ** $p<0.05$; *** $p<0.01$. Standardized coefficients are shown.

4.1 Potential moderating effect of competitive strategy

The results of the subgroup analyses of the test for moderating hypotheses (H3a-c) are presented in Table 4. Model 1 tests the effect of environmental reputation on market performance between low cost and non-low-cost firms. The results in Model 1 (Table 4) show that the beta coefficient of environmental reputation for firms pursuing the non-low cost was positively and significantly related to market performance ($\beta = 0.29$, $p<0.01$; Model 1a) but not significantly related to market performance for low-cost firms ($\beta = 0.06$, *ns;* Model 1b). A t-test comparison (Cohen & Cohen, 1983) shows that the coefficients significantly differ ($t = 2.64$, $p<0.05$), providing no support for Hypothesis 3a.

Model 2 (Table 4) tests the impact of environmental reputation on market performance across differentiation firms and non-differentiation firms. The results in Model 5 (Table 4) indicate that environmental reputation was significantly related to market performance for firms pursuing the differentiation strategy ($\beta = 0.35$, $p<0.01$, Model 2a) but not significantly related to market performance for firms pursuing non-differentiation strategy ($\beta = 0.04$, *ns*, Model 2b). A t-test comparison shows that coefficients are significantly different ($t = 1.67$, $p<0.05$). Hence, the results in Model 2 provide support for Hypothesis 3b.

Model 6 presents the results of the impact of environmental reputation on market performance for firms pursuing integrated and non-integrated strategies. Results in Model 3 indicate that the impact of environmental reputation on market performance was not significant for firms pursuing the integrated strategy ($\beta = 0.03$, *ns,* Model 3a) but positive and significant for firms pursuing the non-integrated strategy ($\beta = 0.31$, $p<0.01$; Model 3b). Thus, Hypothesis 3c was not supported ($t = 1.81$; $p<0.05$).

Table 4: Sub-group analysis of the moderating effects of competitive strategies on environmental reputation–market performance relationship

Variables	**Low-cost strategy**		**Differentiation strategy**		**Integrated strategy**	
	Model 1a	**Model 1b**	**Model 2a**	**Model 2a**	**Model 3a**	**Model 3b**
	Low cost (N = 105)	Non-low cost (N = 118)	Differentiation (N = 110)	Non-differentiation (N = 113)	Integrated (N = 125)	Non-integrated (N = 98)
Control variables						
Firm age	-0.11*	-0.05	0.05	-0.03	-0.03	-0.04
Firm size	-0.10*	-0.09*	0.09*	-0.11*	-0.04	-0.07*
CEO age	0.12*	0.11*	0.13**	0.04	0.05	0.09*
CEO education	0.05	0.11*	0.20***	0.04	0.06	0.08*
Industry (1=high technology; 0=low technology)	0.10*	0.11*	0.16***	0.09*	0.13**	0.04
Environmental reputation	0.06	0.29***	0.35***	0.04	0.04	0.31***
Model fit statistics						
Model F	3.88	6.79	7.69	3.55	3.22	7.58
R^2	0.29	0.36	0.19	0.34	0.21	0.19
Adjusted R^2	0.27	0.38	0.45	0.29	0.33	0.48

*** $p<0.01$, ** $p<0.05$, * $p<0.10$

5. Discussion and implications

The growing concerns for firms to actively embark on environmental protection strategies have received substantial attention (Banerjee, Iyer, & Kashyap, 2003). Despite these concerns, it remains unclear the mediating role of environmental reputation in the proactive environmental strategy—market performance relationship. Also, while empirical scholarship has highlighted the benefits of a firm's environmental reputation (Delmas & Blass, 2010; Morales-Raya, Martín-Tapia, & Ortiz-de-Mandojana, 2019), empirical testing of how competitive strategy moderates the impact of environmental reputation on market performance lacks theoretical precision. To close these research gaps, the current study tests these relationships using insights from the NRBV of the firm (Hart, 1995) and competitive strategy literature (Acquaah, 2007; Hill, Schilling & Jones, 2015; Porter, 1980). Specifically, this study examined the influence of proactive environmental strategy on market performance through the mediating mechanism of environmental reputation. In addition, we investigated the moderating impact of competitive strategy on the environmental reputation—market performance relationship. The findings from this study provide support for most of our hypotheses. First, we found that a proactive environmental strategy positively influences environmental reputation. Second, the influence of proactive environmental strategy on market performance is fully mediated by environmental reputation. Third, the influence of environmental reputation on market performance is stronger for firms that pursue the (1) non-low-cost strategy (i.e., H3a received no support), (2) differentiation strategy (i.e., H3b received support) and non-integrated strategy (H3c received no support). Overall, these findings have several theoretical and practical contributions.

5.1 Theoretical implications

Our findings contribute to the existing literature in three specific aspects. First, the fining that proactive environmental strategy influences environmental reputation expands our understanding of the role of proactive environmental strategy in facilitating SMEs' reputation. The environmental proactivity literature has traditionally highlighted the impact of a firm's environmental orientation on firm performance (Liu, Guo, & Chi, 2015; Quan, Wu, Li, & Ying, 2018). In contrast, this study (i.e., H1) compliments the existing environmental management research by proposing that a proactive environmental strategy could help firms establish a greater environmental reputation. This is because empirical scholarship has established firms that strongly commit to environmental management increase their ability to attract talented employees (Reinhardt, 1999) and investors (Delmas & Blass, 2010). Also, the ability to invest in environmental management issues can attract consumers who prefer to buy products and services from firms with a good environmental reputation (Biloslavo & Trnavčevič, 2009). Moreover, firms with favorable environmental reputation can amplify their general reputation (Tang, Lai, & Cheng, 2012). Therefore, this study provides a more nuanced understanding of how a proactive environmental strategy drives the environmental reputation of SMEs.

Second, the finding that environmental reputation mediates the relationship between proactive environmental strategy and market performance provides new insights concerning the mechanism through which proactive environmental strategy positively relates to market performance. This effort contributes to environmental management studies (Buysse & Verbeke, 2003; Hart & Dowell, 2011) by showing investigating the underlying mechanisms through which proactive environmental influences SMEs' success.

Third, our study differentiates itself from prior environmental management studies by investigating the contingent role of competitive strategy on the environmental reputation—

market performance relationship. Specifically, our study assesses the moderating impact of low-cost, differentiation, and integrated strategies on the environmental reputation—market performance relationship (H3a-H3c). By extension, this finding advances our understanding of the boundary conditions of the effects of environmental reputation. Although the impact of environmental reputation on performance has been investigated in the environmental management literature (Cho et al., 2012), the boundary conditions of this relationship are far from complete. Consequently, this study takes the first step to empirically investigate the boundary conditions of the effects of environmental reputation. Particularly, the findings from H3a-H3c suggests that competitive strategy is such a boundary condition.

5.2 Practical implications

Beyond its theoretical value, this study also provides some relevant practical implications for policymakers and business managers. First, the finding that a proactive environmental strategy is associated with environmental reputation is important for SME managers. That's this finding broadens managerial understanding by highlighting how proactive environmental strategy determines environmental reputation. This is an important finding because previous research shows that a favorable environmental reputation enhances the firm's general reputation (Tang, Lai, & Cheng, 2012). Second, the finding that competitive strategy moderates the relationship between environmental reputation and market performance can help managers understand that environmental reputation per se may not directly influence market performance. In particular, top management should understand the crucial impact of competitive strategy in converting environmental reputation into market performance. With this finding, management can ensure that environmental reputation provides its strategic value for market performance. Third, the findings have important implications for SMEs operating in sub-Saharan Africa. Specifically,

managers of SMEs in sub-Saharan African can understand the impact of implementing an environmental strategy on firm performance. Collectively, the importance of the research findings clearly shows that our study is well established to make significant contributions to extend SME managers' understanding of the role of proactive environmental strategy.

6. Limitations and future research

This study attempts to provide a better understanding of the impact of a firm's proactive environmental strategy on environmental reputation and market performance of SMEs. Whiles our study makes both theoretical and practical contributions to extend the literature, several questions remain unanswered. Our recommendations for future research are divided into three: theory, contexts, and methodology.

6.1. Future directions – theory

Whiles the findings from this study contribute to advancing the environmental strategy literature, some theoretical limitations could be considered in future studies. First, there might be some cultural bias concerning competitive strategy and environmental strategy implementation (Thomas & Mueller, 2000). For example, previous research shows differences in culture between countries relating to the preferred choice of competitive strategies (Allen et al., 2006). The research question examined in this study did not allow us to examine the impact of country cultural factors, which are considered to influence managers' choice of strategy. Therefore, the findings from this study could be enhanced by incorporating country cultural factors in the research model. Second, we did not account for the influence of external factors on environmental strategy of our sample. We recommend that future research investigates the role of external factors on corporate environmental initiatives. It will also be interesting to highlight

how routines and capabilities shape a firm's environmental strategy. For example, future research could use in-depth case studies to help reveal how routines and capabilities predict proactive environmental strategy through external influences.

6.2. Future directions – contexts

Concerning contexts, this study has two limitations that open avenues for future research. First, the respondents were manufacturing SMEs in Ghana, and the external validity of the findings thus remains to be tested. Moreover, the environmental strategy of firms from different sub-industries within the larger manufacturing industry may differ significantly from SMEs (Chen et al., 2015). Therefore, it is recommended that future research consider both service and manufacturing industries to establish this variable's impact on the research model. Second, our study is limited to SMEs operating in Ghana, a sub-Saharan African country. The extent to which these findings must be evaluated in the context of this less developed market economy is less clear. This limits the generalization of the research findings to countries with similar characteristics in sub-Saharan Africa. Thus, we encourage future studies across other developing and developed nations to enhance the findings and most importantly validate the contributions of the current study. For example, future studies in advanced economies such as in Europe and North America where institutions are well developed are recommended. In addition, future studies could compare our findings in large firms such as multinational companies operating in developing economies.

6.3. Future directions – methodology

Despite the strengths of the methodology in selecting our sample—data were collected from multiple informants on the independent and dependent variables —helping us to attenuate inflated correlations associated with cross-sectional surveys (Podsakoff, et al., 2003), the non-use of variable manipulation or random assignment techniques precludes us from making causal claims. More specifically, this study is limited by an endogeneity bias in the form of a reverse causal relationship. We recommend that future research could overcome this limitation by conducting a natural experiment (Kacperczyk, 2009). Besides, the subjective measures of market performance were used as it was difficult to obtain objective financial measures in Ghana. Although the effort to obtained objective accounting measures was unsuccessful, the use of perceptual measures is consistent with previous studies in Ghana (Acquaah, 2007; Adomako & Nguyen, 2020). Therefore, future research should over this limitation by collecting data on objective accounting data to capture market performance. Moreover, while for the main research contribution, a cross-sectional survey is acceptable, the generalizability and external validity of the findings from this study might be limited by the use of a small sample.

7. Conclusion

This study extends our understanding of how a proactive environmental strategy helps firms to achieve superior market performance. Specifically, the findings suggest that the influence of proactive environmental strategy on market performance is fully mediated by environmental reputation. In addition, we find that the impact of environmental reputation on market performance is moderated by competitive strategy. Therefore, our study not only highlights the importance yet the underexplored indirect effect of proactive environmental strategy on market performance but also provides supporting empirical evidence, thereby extending our

understanding of environmental proactivity and its implications on market performance. Finally, the examination of the moderating role of competitive strategy on the relationship between environmental reputation and market performance expands our understanding of boundary conditions of environmental reputation. This contributes to the environmental reputation and strategy literature.

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