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The Effect of Top Management Support on Environmental Sustainability. Does Supplier Development Matter in the Ghanaian Cocoa Industry?

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Abstract
One of the most challenging issues for stakeholders and researchers in the cocoa industry has been developing sustainability in the cocoa supply chain. This study was conducted to explore the effect of top management support on environmental sustainability in Ghana's cocoa supply chain, as well as indicate the indirect role of supplier development in this chain. The study was conducted using survey data from 630 Cocoa farmers in Ghana, and it employed both exploratory and confirmatory factor analyses to assess the validity and reliability of the study constructs. The Partial Least Square-Structural Equation Modeling (PLS-SEM) was used in testing the hypotheses. The findings demonstrate that both top management and supplier

development are significant predictors of environmental sustainability in Ghana's cocoa supply chain. The result also showed a significant effect of top management support on supplier development, and it further indicated that supplier development is very important as such, it cannot be ignored in the effort to improve environmental sustainability in Ghana's cocoa supply chain. The mediating analysis explored in this study revealed that supplier development partially mediates the relationship between top management support and environmental sustainability. The findings of the study showed that an optimal level of environmental sustainability in the cocoa supply chain can be achieved by combining top management support and supplier development. The outcome of the study dwells on cross-sectional data and it covered the views of the farmers at a specific period of time. Meanwhile, using a cross-sectional strategy limits the study's capability to examine the implications of GBSR in ensuring sustainability over a period of time. However, a longitudinal approach that follows farmers over a time period could be used to offer much more insight into (the implications of GBSR on cocoa supply chain sustainability in Ghana).
Keywords: Top Management Support, Supplier Development, Environmental Sustainability, Cocoa Supply Chain.

Introduction

Supplier development is really gaining grounds in ensuring sustainability (Liu et al., 2017; Zeimpekis et al., 2018) in the cocoa industry. The reason being that (international buyers) stakeholders are putting more pressure on those who sell on the international market to focus more on the cocoa environment sustainability (Nelson & Phillips, 2018). In order to achieve good environmental sustainability in the cocoa industry, top management support and supplier development implementation have been realized as the key competitive advantage (Bai & Satir, 2020) and strength for the cocoa industry, especially in Ghana - Africa. Again, supplier development has been realized as a great contributor to environmental sustainability (Blome et al., 2014; Sancha et al., 2016), and it generates outcome which serves the interest of the parties involved. In this study, supplier development (SD) is explained as a way of improving the supplier's capabilities through the commitment of non-financial and financial resources by the buyer to enhance buyer-supplier performance (Ali & Seuring, 2018; Krause et al., 2007; Krause & Ellram, 1997) towards environmental sustainability. An industry which is committed to environmental sustainability tends to depend on top management support, which eventually leads to the achievement of sustainable competitive advantage (Bai & Satir, 2020; Jia et al., 2018).

The development of environmental sustainability in the cocoa industry will require the provision of resources by the buyer with support from top management to develop the supplier. But until now, the study of the relationship amongst top management support, supplier development and environmental sustainability has not been extensively studied with respect to the cocoa industry in Ghana, Africa. This study is driven by the lack of adequate empirical evidence on the role of supplier development in the improvement of environmental sustainability (Flinkman, 2019; Liu et al., 2017) in the cocoa industry in Ghana, Africa. Most of the studies which connect supplier development to sustainability has focused on the manufacturing sector (Bai & Satir, 2020; Sancha et al., 2016, 2019). However, literature (Andres & Bhullar, 2016; Ingram et al., 2018; Wartenberg et al., 2018) shows that there are a lot of gaps regarding sustainability in the cocoa industry that have not been studied empirically, and this include the role played by top management support, supplier development etc. in ensuring environmental sustainability (Gockowski et al., 2013; Vogel et

al., 2020). As a result, the objective of this research is to empirically test a framework on the effect of top management support in enhancing environmental sustainability in the cocoa industry by considering the mediating role of supplier development.

Ghana was chosen contextually for reasons such as Ghana being the second largest producer of cocoa after Ivory Coast and the top quality cocoa producer in the world (Yamoah et al., 2020). Also, Ghana's cocoa production shows a decline from 75 to 50 thousand tons a year (Yamoah et al., 2020) and research reveals that the demand for cocoa will increase by 50% by 2030 (Beg et al., 2017). With the significant role Ghana plays in the production of cocoa for the world market, there still is not much empirical research done in this sector to ensure the continuity of cocoa production in Ghana. This study however seeks to make considerable contribution to this field by first looking at the relationship amongst top management support and environmental sustainability in the cocoa industry through supplier development. The research gives an answer to the call for empirical research on factors that improve environmental sustainability in the cocoa supply chain. Even though the research by Lo et al (2018); Gelderman et al (2017) have looked into TMS, supplier development and its effect on sustainable environment, this proposed framework is different. This research includes a study outcome from Ghana to a study field whose results tilt towards economic and social benefits with little attention on sustainable environment. For example Takyi et al (2019) found that little attention has been given to environmental impact on cocoa.

The rest of this paper is organized into the following: first, the presentation of the theoretical foundation and hypotheses development, followed by the methodology of the study, the empirical results, then the discussion of the results and the implication of the study for academia and practitioners.

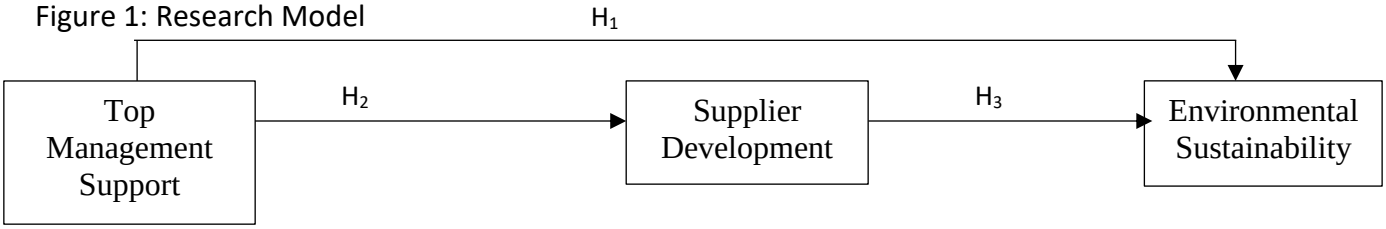
Theoretical Foundation/Hypotheses Development

This research employed resource-based view as the underpinning theory for the study. The RBV posits that firms that have resources that are valuable, rare, and difficult to be duplicated by competitors are positioned in a way that gives them a sustainable competitive advantage(Barney, 1991; Grant, 1991; Peteraf, 1993). RBV further explains that the achievement of a firm's desired performance is dependent on the resources of the firm. It also says that a firm's resources such as capabilities, assets, attributes, processes, knowledge, and information can be used to obtain a firm's sustainable competitive advantage (Eisenhardt & Schoonhoven, 1996). According to (Peteraf, 1993) and (Barney, 1991), the survival of a firm is determined by its ability to bring out new resources, and to build on its capabilities to make them distinct hence creating a sustainable competitive advantage. In this research, environmental sustainability is related to a firm's performance. Improving a firm's performance (environmental sustainability) through unique top management support and supplier development adds to the rarity, the value, and the uniqueness of the resource of RBV(Yang et al., 2019). A resource not only improve a firm's performance but it reduces environmental damage (Jabbour et al., 2017; Latan et al., 2018) and ensures environmental sustainability. The combination of a firm's resources such as top management support and supplier development to influence environmental sustainability in the cocoa industry have not been further explored. Considering that supplier development can be used for managing environmental sustainability (Khan et al., 2018), Resources And Capabilities of the firm such as top management support will be an important driver for supplier development. Therefore, this research is founded on RBV as a theoretical foundation to explain the combination of the resources to improve sustainable environment of the cocoa industry in Ghana.

Conceptual Framework and Hypotheses Development

Figure 1 shows the relationship between top management support, supplier development and environmental sustainability in the cocoa supply chain in Ghana.

Figure 1: Research Model



Top Management Support, Supplier Development and Environmental Sustainability

It is acknowledged that top management support plays a pivotal role in achieving environmental sustainability (Yunus et al., 2013). Supplier development on the other hand, signifies a buying firm's effort and ability to improve the capabilities of suppliers and this enhances the firm's competitive advantage (Humphreys et al., 2004; Modi & Mabert, 2007). Buyers also commit resources such as financial assistance, technological know-how and managerial capabilities (Zhang et al., 2017) to the firm. Supplier development is any agreed activities carried out by the buyer to identify, improve and measure supplier performance and also expedite continuous improvement of supplies to the buying firm. The support from top management towards supplier development is important for any change towards environmental sustainability (Rameshwar Dubey, Angappa Gunasekaran, Stephen J. Childe, Thanos Papadopoulos, 2019) hence, the support given by top management is a strategic antecedent that supports sustainable practices through the supplier (Tarigan et al., 2020). The support of management for supplier development normally helps the suppliers to develop good standards to improve sustainable cocoa environment (Shalique et al., 2021). More specifically, top management support suggests not just an organizational mandate to strive for environmental excellence, but assists with 'issue legitimation' where the organization's identity is positively changed towards environmental initiatives (Sharma, Pablo, and Vredenburg 1999, 102). Such mindset shift could pave the way for a comprehensive overhaul of an organization's sustainability initiatives, operations, routines, structures, and goals (Coddington 1993; Hart 1995; Menguc et al., 2010). Given its ability to provide access to resources, capabilities, and information, top management commitment might also be envisioned as a key player in supporting supply-side sustainability activities which ultimately sets new norms of legitimacy. Accordingly, Constantin et al (2014) indicated that top management commitment plays essential support to green supplier development. Once top management understands the benefit that may come out from environmental ingenuities, it will be persuaded to provide support for the sustainability of the cocoa environment. Past studies have found positive relationship between top management support to environmental sustainability (Feenstra et al., 2011; Neira, 2016) in the cocoa industry and between top management support and supplier development (Dubey et al., 2019). According to Latan et al (2018) the involvement of top management in environmental management is a critical factor in evaluating and ensuring environmental sustainability. Hence the following hypotheses;

H1. The support of top management has a significant effect on environmental sustainability
H2. The support of top management has a significant effect on supplier development
H3. Supplier Development has a significant effect on environmental sustainability

H4. The support of top management has a significant indirect influence on environmental sustainability through supplier development

Methodology

Data was gathered from 630 Cocoa farmers in Ghana. These farmers were purposively selected to participate in the survey because they possess the requisite knowledge to help answer the questionnaire. The respondents completed a structured questionnaire and before distributing the questionnaire, the researcher explained and introduced the questionnaire to the respondents. They were informed that their participation in the survey is purely voluntary; in other words, they don't need to participate in the survey. Respondents who agreed to participate in the survey used approximately fifteen (15) minutes to complete the questionnaire. The researcher responded to all ambiguities identified during the introduction and explanation of the questionnaire. Eligibility of the respondents was not difficult because they were all purposely selected from budget hotels. To ensure a high response rate, respondents were promised that any information they provide would not be shared with a person or an organization and that only the researcher would have access to the data. A total of 700 questionnaires were administered but 636 questionnaires were received. This represents a response rate of 96.19% and the 630 questionnaires were used for analysis. In all 77% of the respondents were male and 33% were female, indicating that males dominate the production and supply of cocoa to COCOBOD. About 8 percent were between the ages of 20 to 29 years, 24.7 percent falls between 30 to 39 years, 27.2 percent between the ages of 40 to 49 years, 21.4 percent are between the ages of 50 to 59 years, 13.1 percent are between the ages of 60 to 69 years and 5.6 percent are 70 years and above. Majority of the farmers have obtained basic education. 17.4 percent have no formal education, 43.6 percent are middle school graduates, 20.2 percent are junior high school graduates, 12.8 percent are senior high school graduates and 6 percent have obtained tertiary education.

The instruments used to measure the constructs in the model were sourced from the extant literature. The first part of the questionnaire asked the participants to indicate their willingness to participate in the survey. This was to provide the opportunity for the respondents to freely decide and consent to participate in the survey. The subsequent section of the questionnaire captured the respondents' demographic profile. The last part of the questionnaire contained items that measured the latent variables. A 5-point Likert scale of 5=representing strongly agree to 1=representing strongly disagree was used in the questionnaire. Top management Support was operationalized using a four-item scale designed and validated by (Babakus et al., 2003; Nazir et al., 2016). The scale for Supplier Development was operationalized using six items adapted from the instrument originally developed and validated by (Kumar and Rahman, 2016). The scale for environmental sustainability was operationalized using five items adapted from the instrument originally developed and validated by (Ygan et al., 2016).

Before the data analyses, the raw data was checked and cleaned adequately for any form of error in an attempt to eliminate redundant, incomplete, or incorrect data. The missing data were corrected using the expectation-maximization procedure, and the cleaned data was imported into the Statistical Software Programme for Social Sciences (SPSS) and Smart PLS for analyses. While the SPSS was used for descriptive, normality, CMB, None response bias and EFA; Smart PLS was used for validation of the measuring items through dimensional reduction. Both direct and indirect relationships between the constructs were explored using

Smart PLS-SEM. SEM gives methodological support from two disciplines i.e. the factor analysis models from psychometric theory and usually links it with econometrics (Awang, 2012). SEM's stoutness makes it an appropriate tool capable of testing the entire model simultaneously and assessing measurement errors. These capacities are pertinent with the sizeable errors (Byrne, 2001). As a substitute to covariance-based SEM (CB-SEM), this method focuses on approximating a set of model parameters; hence, this study employed a covariance-based SEM, i.e., SMART PLS.

Data Analyses and Result

Data analyses were done using SPSS and Partial Least Squares (PLS). While the SPSS was used for preliminary tests including descriptive, normality, CMB, none response bias and EFA, the Smart PLS (i.e., first-generation multivariate path analyses procedure) was used for validation of the measuring items through dimensional reduction. The PLS involves two main phases: the model measurement (reliability and discriminant validity) and the structural model assessment.

Test for Normality and Missing Values

An assessment of data normality is a prerequisite for many statistical analyses because normal data is an important underlying assumption in parametric analyses. For this study, normality was explored, even though it is not a necessity for using PLS-SEM. This is essential because an unusual distribution of the dataset can negatively influence the standard error of bootstrapping. The distribution in Table 1 shows that none of the values exceeded the threshold for skewness or kurtosis. The rule of thumb posits that skewness within ± 2.00 standard error of skewness and kurtosis within ± 3.00 standard error of kurtosis is acceptable (Garson, 2012; Hair et al., 2010). The data also show the absence of missing values in the dataset.

Table 1 Test for Normality and Missing Values

Items	Missing	Mean	Excess Kurtosis	Skewness
Environmental Sustainability	0	3.978	1.993	-1.109
Supplier Development	0	4.091	0.601	-0.673
Top Management Support	0	4.165	-0.381	-0.571

Common Method Bias and None Response Bias

We evaluated common method bias using Harman's single factor test to validate the suitability of the constructs in the measurement model as recommended by Shashi et al (2019). According to Podsakoff et al. (2003), the one-factor test as Harman's considers all the observed variables in exploratory factor analysis (EFA) and assesses whether a single factor accounts for or explains more than 50% of the calculated variance. The result as presented in Table 2 below shows that the largest variance explained by a single factor is 41% which is below the 50% threshold of the EFA using the principal component analysis extraction method. This confirms the absence of CMB in the dataset. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 95% while Bartlett's test also showed significantly (χ^2 = 4637.533, df.: 276, $p < 0.000$).

Additionally, the correlation matrix was used to further validate the absence of CMB following the limitations of Harman's one-factor approach. As per the recommendation of Tahseen et

al. (2007), the correlations among the main constructs should not exceed a recommended threshold to confirm the absences of CMB. The result in our study revealed that the correlations among the principal constructs are small (r<0.9). This further confirms Harman's one-factor test result, hence there is no issue of CMB in this research model.

A test of non-response bias was conducted to ensure a high quality of data used (Oppenheim, 2001; Armstrong and Overton, 1977). We followed the procedure suggested by Oppenheim (2001, p.106) to investigate non-response bias in our study, and it revealed that the first 115 responses and the last 116 responses were considered as early responses and late responses respectively. T-test analysis was employed to test for non-response bias. The results of the t-test analysis did not indicate any significant difference (See Appendix 1).

Table 2 Test for Common Method Variance (CMV)

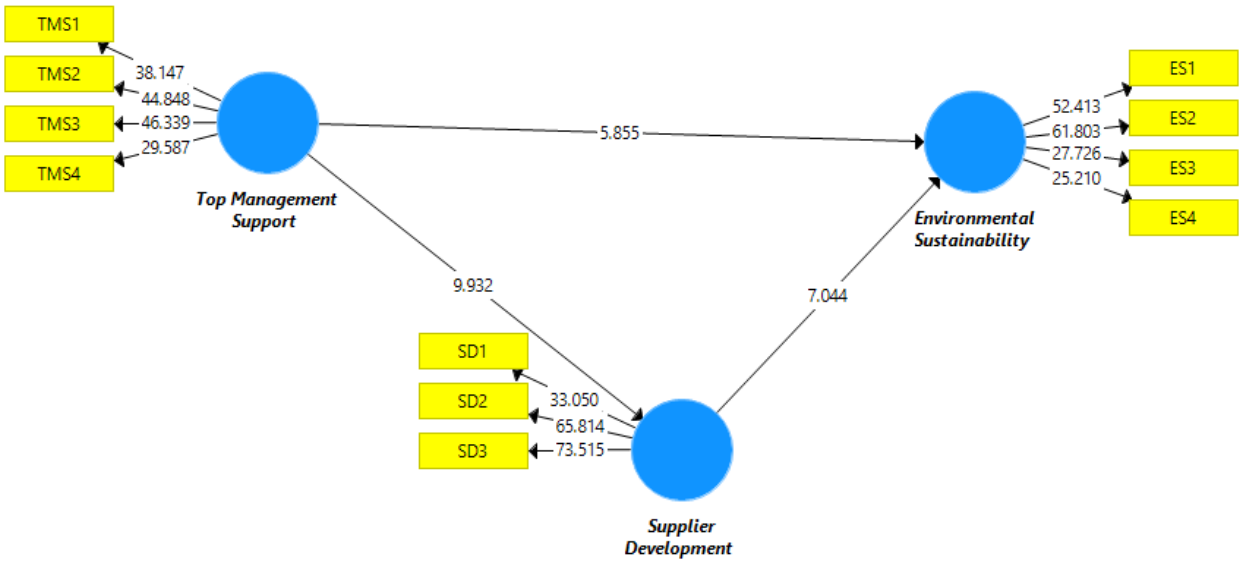
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.687	40.813	40.813	11.687	50.813	50.813
2	3.377	24.683	65.496	3.377	14.683	65.496
3	1.790	7.783	73.279	1.790	7.783	73.279
4	1.231	5.351	78.630	1.231	5.351	78.630
5	1.123	4.883	83.513	1.123	4.883	83.513
6	.893	3.884	87.397			
Extraction Method: Principal Component Analysis.						
KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					.951	
Bartlett's Test of Sphericity	Approx. Chi-Square				4637.533	
	df				230	
	Sig.				.000	

Measurement Model

For measurement model validity and reliability, Confirmatory Factor Analysis was conducted using Smart PLS version 3. The process employed the maximum likelihood estimation method for testing the validity and reliability of the constructs. The model measurement evaluation was conducted as a prerequisite for the structural model analysis. The model measurement evaluation comprised reliability and validity using Cronbach Alpha (CA), Composite Reliability (CR) and Average Variance Extracted (AVE). The result in Table 3 below shows that all the constructs that had good scale reliability (ie. Cronbach Alpha and Composite reliability) were higher than 0.7 (Fornell and Larcker, 1981; Henseler et al., 2015), hence all the constructs had acceptable internal consistency and reliability. Additionally, AVE which was also used to assess the convergent validity of the constructs were found above the 0.5 thresholds. We further used VIF to examine the issue of multicollinearity. The collinearity statistics for both inner and outer (VIFs) meet the <3 threshold as recommended by Ringle et al., (2015). We also employed the Fornell- Larker criterion and HTMT ratio to assess the discriminant validity of the model of which the result proves that our model has no issue of discriminant validity, as the square root of the AVEs were higher than the ones within correlation among the variables in the model (see Appendix II). The discriminant validity test was further explored using the HTMT ratio, the HTMT threshold (< 0.90) was met which also confirms the discriminant validity of the research model (see Appendix III).

Table 3 Validity and Reliability

Constructs	Items	Loadings	CA	rho_A	CR	AVE	VIF
Environmental Sustainability	ES1	0.889	0.874	0.880	0.914	0.728	2.830
	ES2	0.898					2.955
	ES3	0.845					2.108
	ES4	0.775					1.653
Supplier Development	SD1	0.877	0.874	0.876	0.922	0.798	2.203
	SD2	0.891					2.323
	SD3	0.912					2.616
Top Management Support	TMS1	0.850	0.867	0.870	0.909	0.714	2.150
	TMS2	0.858					2.094
	TMS3	0.851					2.125
	TMS4	0.820					1.937



Testing of Hypothesis

Once the measurement model evaluation meets all the reliability and validity thresholds, the next phase of the analysis is the structural model assessment and hypothesis testing via the variances of dependent variables in addition to the model's predictive relevance using stone-Geisser's Q^2, path coefficients and significance levels (t-values). We used the blindfolding procedure to estimate the Q^2 and the result as provided in Table 4 shows that supplier development and environmental sustainability recorded Q^2 values of 0.226 and 0.319 which are above the threshold (>0). Again, the coefficient of determination (R^2) was small (0.290) and moderate (0.448) for supplier development and environmental sustainability respectively. The implication is that supplier development and environmental sustainability account for approximately 45% of variations of environmental sustainability in Ghanaian Cocoa Supply Chain.

The outcome of the analysis showed that the first (H1) hypothesis of the study which sought to examine the effect of Top Management Support on environmental sustainability was confirmed with (B=0. 342; t=5.855; P=0.000; Sig<0.005). The analysis also supported H2, which also envisaged a positive significant association between Top Management Support on supplier development (B=0. 541; t=9.932; P=0.000; Sig<0.005). Again, the third (H3) hypothesized was also confirmed, that is supplier development positively influences environmental sustainability in Ghanaian Cocoa Supply Chain (B=0. 423; t=7.044; P=0.000; Sig<0.005). We, therefore, conclude that all the three direct hypotheses were supported. Additionally, the study envisaged that the Supplier Development would play an essential mediating role in the direct link between Top Management Support on environmental sustainability. The result shows that the Supplier Development plays a significant indirect role in strengthening the link between Top Management Support on environmental sustainability in Ghanaian Cocoa Supply Chain (B=0. 229; t=5.801; P=0.000; Sig<0.005). The results proves that the link between Top Management Support on environmental sustainability is much stronger when suppliers receive necessary training.

Table 4 Predictive Relevance

Construct	**R^2**	Q^2
Environmental Sustainability	0.448	0.319
Supplier Development	0.290	0.226

Hypothesis	**Path Coefficient**	**T Statistics**	**P Values**	**Results**
Top Management Support -> Environmental Sustainability	0.342	5.855	0.000	Confirmed
Top Management Support -> Supplier Development	0.541	9.932	0.000	Confirmed
Supplier Development -> Environmental Sustainability	0.423	7.044	0.000	Confirmed
Top Management Support -> Supplier Development -> Environmental Sustainability	0.229	5.801	0.000	Confirmed

Discussion of Results

Supplier Development plays an indispensable role in improving sustainability along supply chains. Though the concept has been well operationalized in diverse settings, its recent theoretical development warrants further empirical investigation especially in the cocoa supply chain. Hence this study is a contemporary attempt to unearth the indirect (mediating) role of supplier development in the direct link between top management support and environmental sustainability in Ghanaian supply chain in the cocoa setting. The outcome of the study therefore sheds light on the relevance of top management support in ensuring environmental sustainability in Cocoa Supply Chain in Sub Sahara Africa, specifically Ghana, a developing economy and a key supplier of cocoa to the international market. The outcome of this study advances environmental sustainability discourse, provides policymakers, COCOBOD, and the Ghanaian government with contemporary view of the top management's commitment to green initiative together with supplier development could optimize environmental sustainability especially in the cocoa supply chain in developing economy

perspective. The study explored the direct link between top management support and environmental sustainability. According to the findings of this study, top management support has significant positive impact on the environmental sustainability of the cocoa supply chain. This implies that top management support plays a key role in ensuring sustainability and in the Ghanaian cocoa supply chain, the COCOBOD formulates sustainability policies and strategies, train farmers on how these strategies must be implemented as well as provide required resources to ensure effective implementation. These activities invariably improve sustainability along the supply chain, as such the outcome backs up previous claims that supply chain sustainability might be realized or made possible by top management's efforts to support farmers (Huang et al., 2012; Huang et al., 2012). Additionally, past studies have also found positive relationship between top management support and environmental sustainability (Feenstra et al., 2011; Neira, 2016). Liu et al (2018) posit that supplier development is a critical aspect of ensuring sustainability and it requires multi-stakeholder effort; consequently, the absence of management support (training and reward) will affect suppliers' knowledge in sustainability practices in the supply chain. The outcome of this study demonstrated that top management support has a significant positive effect on supplier development; thus, the finding implies that improving the supplier's capabilities by the buyer can be realized via committing both non-financial (training) and financial resources (reward) to the firm. The findings relate to previous study of Constantin et al (2014) which established that green supplier development is driven by top management support. Again, the findings showed that supplier development also expedite continuous improvement of supplies to the buying firm and the support from top management towards supplier development is important for any change towards environmental sustainability (Rameshwar Dubey, Angappa Gunasekaran, Stephen J. Childe, Thanos Papadopoulos, 2019). Thus this study supports that supplier development is a strategic antecedent to support sustainable practices (Tarigan et al., 2020). Also, the support of management for supplier development normally helps the suppliers to develop good standards to improve sustainable cocoa environment (Shalique et al., 2021). Finally, the result showed that supplier development partially mediates the relationship between top management support and environmental sustainability. This result implies that environmental sustainability is not just directly driven by top management support and supplier development rather, the findings demonstrate that optimal level of environmental sustainability in the cocoa supply chain can be achieved through the combination of top management support and supplier development.

Conclusions

The objective of this research was to examine the resources of the Ghana cocoa industry in ensuring and improving environmental sustainability. The study answers the research call to improve environmental sustainability in the cocoa industry (Carodenuto & Buluran, 2021; Yamoah et al., 2020). In this study, the researchers argue that for the cocoa industry to achieve a sustainable environment, support from top management and the implementation of supplier development cannot be shelved. The study findings confirm what was predicted because the hypothesis that top management support positively influences environmental sustainability was supported. The study empirically shows that there is a positive significant effect between top management support and environmental sustainability through supplier development. The PLS results shows a strong argument that top management support can help improve environmental sustainability. The study extends

the work of (Ilyas et al., 2020), because this paper article examines top management support on supplier development, and on environmental sustainability in Ghana's cocoa industry.
The practical implication is that, the findings of the study reveal a deep understanding about how Ghana cocoa board should improve and ensure environmental sustainability by developing top management support for sustainable environment and improving supplier development as an important tool. This outcome can help decision makers such as Ghana cocoa board to constantly ensure environmental sustainability. Generally top management, suppliers and managers of the cocoa environment should develop environmental regulation that will help ensure sustainable environment in the cocoa industry.

Like any other research, there are limitations to this study, this research considered supplier development as antecedent to environmental sustainability in cocoa without taking into consideration the role of environmental governance. There is the possibility of different results when both are considered. The research did not examine economic and social sustainability, so a study can be conducted on whether environmental sustainability will be followed by economic and social sustainability. Lastly, the outcome depicts a sample from Ghana cocoa industry, however different countries may have different governance priorities. Future studies may consider the role of green governance in ensuring environmental sustainability in the cocoa industry. This research can also be conducted in other cocoa growing countries to strengthen the study results.

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Appendix

Test for Non-Response Bias

			Levene's Test for Equality of Variances		
Variables	Group	N	F	Sig.	t
ES	1.00	115	0.792	0.703	1.628
	2.00	116			
SD	1.00	115	0.029	0.865	1.139
	2.00	116			
TMS	1.00	115	0.233	0.267	1.490
	2.00	116			

Fornell-Larcker Criterion

	Environmental Sustainability	Supplier Development	Top Management Support
ES	0.853		
SD	0.603	0.894	
TMS	0.570	0.539	0.845

Heterotrait-Monotrait Ratio (HTMT)

	Environmental Sustainability	**Supplier Development**	**Top Management Support**
ES			
SD	**0.688**		
TMS	**0.652**	**0.617**	