


# Social risk, green market orientation, entrepreneurial orientation, and new product performance among European Multinational Enterprises operating in developing economies

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## Abstract

The current study sought to assess the mediating role of green market orientation dimensions in the relationship between social risk and new product performance among European Multinational Enterprises (EMNEs). We also assessed the moderating role of entrepreneurial orientation in the relationship between green market orientation and new product performance. The study was based on primary data gathered from 317 EMNEs in Ghana. After various validity and reliability checks, ordinary least squares (OLS) analysis was performed to estimate the various relationships hypothesized in the study. The study finds that social risk has a negative effect on the success of EMNEs' new products. This negative effect is however nullified by the positive mediating effects of strategic green market orientation, tactical green market orientation and internal green market orientation. Entrepreneurial orientation also played a significant moderating effect in the relationship between green market orientation dimensions and EMNEs' new product performance. Based on this, theoretical and managerial contributions were made.

## KEYWORDS

green market orientation, new product performance, social risk

## 1 | INTRODUCTION

Environmental issues continue to remain one of the greatest challenges in this 21st century, with increasing stakeholder pressure and green consumerism. The dynamic and increasingly complex nature of the business environment requires that firms adapt their strategic orientations in order to live up to the changing trends of the business environment (Mason, 2007). In the past, market-oriented organizations tend to measure the success of their new product based on customers' positive attitude toward the perceived value of the product (Delpchitre et al., 2018). Ever since the issue of sustainability became prominent, environmentally friendly concepts such as green marketing (e.g., Kumar, 2015; Ottman, 1992), sustainability marketing (e.g., Charter et al., 2006), sustainable marketing (Fuller, 1999), ecological marketing (e.g., Fisk, 1974), and environmental marketing (e.g., Coddington, 1993) have received both academics and practitioners' attention to achieve stakeholders' satisfaction. The adoption of these environmentally friendly concepts are believed to be a result of social risk (Nair & Ndubisi, 2011; Pujari et al., 2003). In developing countries such as Ghana, firms do not pay much attention to environmental issues, because of weak environmental policies, poor implementation of environmental policies by enforcement institutions, and weak pressure groups (Efobi et al., 2019). Studies such as Hoang et al. (2019) have, however, indicated that the trend is gradually changing in these developing countries, as environmental awareness in these countries is gradually increasing.

The current study, judging from its theoretical implication for strategy implementation and success, asks the questions: what would be the effect of social risk under different green market orientations (strategic green market orientation, tactical green market orientation and internal green market orientation) dimensions? And how would the firm's entrepreneurial orientation (willingness to be innovative, proactive, and risk taking) influence the firm's green market orientation and new product performance relationship? The extant literature on green marketing has been focused on performance related measures such as consumer purchasing patterns (see Juwaheer et al., 2012) with limited studies in recent times focusing on the internalization of green marketing as an organizational culture by conceptualizing the concept of green market orientation (Chahal et al., 2014; Papadas et al., 2017). Firms in their domestic market tend to adhere to the stringent environmental measures. However, an assessment of those multinational companies, especially, those from Europe in foreign markets seems to be lacking. European Multinational Enterprises (EMNEs) as the context of the current study was based on fact that the European Union through its Single European Act (SEA) was one of the few unions that adopted environmental decision-making process dating back to 1970s. Hence, the study seeks to assess the impact of social risk on new product performance and the role green market orientation plays in the social risk and new product performance relationship.

Social risk according to Bekefi et al. (2006) is challenges or potential negative consequences of stakeholder's action to companies' business as result of perceived or real business impacts on the natural environment or human life. Firms are said to have social contract with a group of individuals whose actions directly and indirectly affect organizations' existence, performance and new product performance (Backer, 2007; Borah et al., 2022; Freeman, 1984). This group of individuals per the definition of social risk include "businesses, financiers, executive governments, regulators and NGOs" (Graetz & Franks, 2015, p. 6). Social risk or any other form of risk to businesses

tends to have a devastating effect on firms' image, reputation, market value and profitability (Graetz & Franks, 2013). In an attempt to limit the strategic threat social risk possess to firms, Boutilier and Thomson (2011) encourage organizations to adopt social license thus economic legitimacy, socio-political legitimacy, interactional trust, and institutionalized trust. Other studies have also confirmed the influence of social risk on the practice of environmental marketing or green marketing (Borah et al., 2022; Nair & Menon, 2008; Nair & Ndubisi, 2011; Polonsky, 1995) but not its influence on internalizing green marketing culture. Though studies have recently conceptualized the green market orientation (e.g., Chahal et al., 2014; Papadas et al., 2017) and determined the influence of stakeholders' environmental pressure on strategic green market orientation (Papadas et al., 2019), not many studies have been conducted to determine how social risk stimulates the internalization of green marketing culture and its resultant outcomes in terms of new product performance. The study therefore seeks to find out how the three dimensions of green market orientation (strategic green market orientation, tactical green market orientation and internal green market orientation) mediate the social risk and new product performance relationship.

The practice of green marketing is said to enhance the perception of firms. Previous studies have confirmed the positive effect of green market orientation on firm performance (Chahal et al., 2014), marketing performance (Papadas et al., 2017). A recent study has also shown that stakeholders' environmental pressure influences one of the dimensions of green market orientation, thus, strategic green market orientation leading to competitive advantage and financial performance (Papadas et al., 2019) and not on all the three dimensions. Whereas a prior study (Papadas et al., 2019) explored the interacting effect of internal green market orientation on strategic green market orientation and firm competitive advantage relationship, studies that attempt to test the effect of the firm's willingness to be innovative, proactive, and risk taking in relation to green market orientation and new product performance relationship are limited. Entrepreneurial orientation that is characterized as innovativeness, proactiveness, and risk taking has been recognized as a significant strategic resource that determines the firm's philosophy of how to take certain strategic decisions in a changing business environment and conduct business (Lisboa et al., 2011). Studies have also confirmed the positive influence of entrepreneurial orientation on other concepts that tend to influence firm performance (Chavez et al., 2017; Lisboa et al., 2011). The current study therefore suggests that the success of any new product is dependent on the firm's entrepreneurial orientation toward the conception, development, and commercialization of the product (Hong et al., 2013). Entrepreneurial orientation, which is the willingness of management to be innovative, proactive, and risk taking, has the tendencies to influence the effect of green market orientation on new product performance. The current study intends to contribute to the green marketing literature by examining the moderating role of entrepreneurial orientation on the relationship between green market orientation and new product performance. Again, the current study focuses on the role of green market orientation and entrepreneurial orientation, in the relationship between social risk and new product performance of EMNEs.

## 2 | LITERATURE REVIEW

### 2.1 | Research gap

A myriad of studies were conducted to examine the effect of stakeholder pressure on environmental performance and other performance related outcomes (Borah et al., 2022; Jiao et al., 2020;

Nguyen & Adomako, 2021; Shubham et al., 2018). Again, other studies have also focused on how stakeholder pressures force or encourage firms to incorporate green innovation in their strategic orientation (Kawai et al., 2018; Rui & Lu, 2021; Singh et al., 2021; Zhang et al., 2020). However, these studies tend to focus more on stakeholder pressure and lack focus on how these pressures from stakeholders cause serious risk (in terms of firms' new product acceptance) to firms and how it facilitates the adoption of green culture in an organization. Again, not many studies have been done to assess the risks associated with pressures from stakeholders when it comes to Multinational Enterprises more especially EMNEs in foreign markets. For instance, Borah et al. (2022) assessed the effect of stakeholder risk on new product performance and the mediating role of green market orientation but not the moderating effect of entrepreneurial orientation on the green market orientation and new product performance relationship. Nguyen and Adomako (2021) examined the role of stakeholder pressure on eco-innovation of Vietnamese small- and medium-sized enterprises (SMEs). Shubham et al. (2018) empirically assessed how different stakeholder groups directly and indirectly affect organization's adoption of sustainable practices based on a sample from emerging economies. Jiao et al. (2020) aimed to evaluate how stakeholder pressure, managerial perceptions, and resource availability affect the adoption of sustainable operations in Chinese manufacturing firms. Singh et al. (2021) investigated the direct and indirect influence among stakeholder pressure, green dynamic capabilities, green innovation, and performance of emerging market SMEs. Zhang et al. (2020) evaluate how variables such as technology characteristics, stakeholder pressure and social influence determine the intentions to adopt green innovation of Chinese express companies.

In Ghana, a study by Otchere et al. (2021) sought to assess stakeholder pressure-innovation relationship in Ghanaian SMEs and the role firm size plays in this relationship. Mensah (2014) also examined how primary and secondary stakeholders affect the environmental performance of hotel in Accra and the role hotel size plays in the stakeholder pressure-environmental performance relationship. Adomako et al. (2019) developed and tested a model that examined the relationship between stakeholder integration and firm-level product innovativeness of SMEs in Ghana. Konadu et al. (2020) assessed the moderating role of stakeholder pressure on the relationship between CEOs' reputation and quality management of manufacturing firms in Ghana. It therefore suggests that empirical studies on the effect of social risk on new product performance and the role of green market orientation and entrepreneurial orientation of European Multinational in Ghana seems to be inadequate. Hence, the current study seeks to contribute to social risk, green market orientation, new product performance, and entrepreneurial orientation literature of multinational enterprises in Ghana.

## 2.2 | Mediating role of green market orientation

Different scholars have conceptualized the green market orientation concept into different dimensions; thus, strategic green market orientation, tactical green market orientation, and internal green market orientation (Papadas et al., 2017), and green strategic policy, green promotion, greening the process, green supply chain management, and proactive energy conservation (Chahal et al., 2014). This paper, however, adopted Papadas et al. (2017) green market orientation construct as it tends to incorporate the top three dimensions of Chahal et al. (2014), thus green strategic policy, green promotion, and greening the process, which deal with the issue of internalizing green culture. According to Papadas et al. (2017, p. 240), green market orientation is defined "as the extent to which an organization engages in strategic, tactical and internal

*processes and activities which holistically aim at creating, communicating and delivering products and/or services with the minimal environmental impact*". Social risk on the other hand, is defined as "challenges by stakeholders to companies' business practices due to real or perceived business impacts on a broad range of issues related to human welfare – for example, working conditions, environmental quality, health, or economic opportunity" (Bekefi et al., 2006, p. 3).

Social risks are perceived to have negative effect on business operations especially the introduction of new products, development timelines and capital expenditure, and image and reputations of firms (Borah et al., 2022; Kytte & Ruggie, 2005; Rio Tinto, 2011). Studies have also stressed the risk associated with stakeholders' pressure on organizations' image, reputations, and performance (Borah et al., 2022; Konadu et al., 2020; Otchere et al., 2021). Firms in an attempt to limit the impact of social risk on firm reputation and performance have adapted their strategic orientation to incorporate environmental issues and adopt environmental concerns as a cultural trait. Green market orientation in recent times is regarded as a key internal organizational know-how and strategic tool that has positive influence on firm performance (Borah et al., 2021). Hence, firms that address their stakeholders' environmental concerns by incorporating environmental concerns have the tendency of enhancing their firm image, reputation, performance, and new products acceptance (Borah et al., 2022; Luo & Bhattacharya, 2006; Mu et al., 2009). The current study therefore, seeks to assess the mediating role of the dimensions of green market orientation by Papadas et al. (2017) in social risk and new product performance relationship.

Strategic green market orientation is the extent to which firms regard environmental issues as a long-term strategic decision that top management undertakes to avert future risk from stakeholders and encourage new product acceptance (Borah et al., 2022; Papadas et al., 2017). For firms to prevent stakeholder agitations and its attendant risk, it is important that firms adapt their strategic marketing orientations and objectives to incorporate green or environmental issues (Stoeckl & Luedicke, 2015). This if properly done and communicated gets to affect the performance of firms in terms of new products acceptance (Borah et al., 2021). According to Papadas et al. (2019), strategic green market orientation positively influences the financial performance of firms. Borah et al. (2021) found green market orientation to have a direct positive influence on new products. Again, Borah et al. (2022) established that strategic green market orientation mediated the stakeholder risk and new product performance relationship. This therefore means that firms that tend to avoid risk associated with stakeholder pressures and adapt their strategic orientation to inculcate green culture to address environmental concerns are likely to enjoy new product acceptance. Based on the above discussion, we hypothesize the following:

**H1** *Strategic green market orientation mediates the relationship between social risk and new product performance.*

Tactical green market orientation is regarded as the day-to-day tactical decisions undertaken by top management to amend the traditional marketing mix to green marketing mix in order to address stakeholders' environmental concerns (Borah et al., 2022; Papadas et al., 2017; Vilkaite-Vaitone & Skackauskiene, 2019). The risk associated with stakeholder pressure have the tendencies of influencing firms' green culture, which can further affect the acceptance of new products introduced by firms. Incorporation of green marketing mix is said to provide increased brand image, honesty, credibility, transparency, and enhance trust (Padhy & Vishnoi, 2015), which eventually minimize the negative effect of environmental concerns. Green marketing mix is said to complement the traditional marketing mix, which further results in increased sales, profit, market share, brand value, and competitive position (Vilkaite-Vaitone & Skackauskiene, 2019). Studies have established the positive effect of green market orientation on firm's performance

(Borah et al., 2021; Tjahjadi et al., 2020; Lin et al., 2020; Li et al., 2018; Papadas et al., 2017). For instance, Borah et al. (2021) found green market orientation to have a direct positive effect on new product performance. Tjahjadi et al. (2020) also revealed that green market orientation has a positive influence on business performance. Lastly, Borah et al. (2022) found tactical green market orientation to mediate the relationship between stakeholder risk and new product performance. Based on the discussion above, we hypothesize the following:

**H2** *Tactical green market orientation mediates the relationship between social risk and new product performance.*

Internal green market orientation is the extent to which organizations internalize green culture in their strategic marketing decisions (Mishra et al., 2019; Papadas et al., 2017). Dealing with environmental concerns as internal policy decisions have the tendency of limiting the negative effect of social risk on the firms' new product performance (Borah et al., 2022). It is again suggested that the formulation and internalization of green strategic marketing policy maybe due to stakeholders' expectations and pressure (Papadas et al., 2019). This therefore, means that an organization's ability to inculcate green culture in its strategic marketing policy may be caused by social risk (Borah et al., 2022). In addition, consumers' green purchase behavior in recent times have been increasing; hence, firms that internalize green culture tend to enjoy new product acceptance (Borah et al., 2021; Wang et al., 2020). Again, Borah et al. (2021) posit that firms' image are enhanced as a result of their green orientation, which further translate into the success rate of new products. Based on the above discussion, we hypothesize the following:

**H3** *Internal green market orientation mediates the relationship between social risk and new product performance.*

## 2.3 | Moderating role of entrepreneurial orientation

According to Rwehumbiza and Marinov (2019), entrepreneurial orientation is generally regarded as the adoption of strategic processes and style by firms that engaged in entrepreneurial activities. Entrepreneurial orientation explains the firm's willingness to embrace innovation in their product marketing, risk taking ventures that may be new to the firm and being proactive in addressing environmental issues in order to prevent the occurrence of social risk (Chavez et al., 2017; Miller, 1983). That is, entrepreneurial firms must be innovative, risk taking, and proactive. *Innovativeness* is regarded as the firms' initiative to adopt creative ways in the introduction of new products or services. *Risk taking* is the willingness of the firm to commit vital resources to ventures in uncertain environment. *Proactiveness* is regarded as the firm's pursuance of new opportunity that leads to the introduction of new product ahead of the competition in expectation of future demand. (Chavez et al., 2017; Kam-Sing Wong, 2012; Rauch et al., 2009). Based on other studies, the current study adopts entrepreneurial orientation as a unidimensional construct because the three dimensions have been asserted to be of equal importance in explaining other variables (Chavez et al., 2017; Rauch et al., 2009). Though some studies contend entrepreneurial orientation to be multidimensional construct such as autonomy, innovativeness, risk taking, proactiveness, and competitive advantage (Lumpkin & Dess, 1996), others have also postulated that it is a unidimensional construct and have focused on only three dimensions such as innovativeness, risk taking and proactiveness (Covin & Slevin, 1991; Rauch et al., 2009) and have been corroborated by Meta-analyses studies of entrepreneurship literature (Rauch et al., 2009; Rosenbusch et al., 2013).



The survival of firms' new product in an increasing complex and dynamic environment depends on their ability to implement strategies such as green market orientation to survive. Green market orientation has been conceptualized into three major dimensions such as strategic, tactical and internal green market orientation. Consumers' perception of a company's green marketing adoption, encourages their purchase behavior of green products (Tsai et al., 2020). Again, studies have suggested that companies that are perceived to practice green marketing and green products stimulate consumers to pay more for their products (Chou et al., 2020; Laroche et al., 2001). Papadas et al. (2017) contend that consumers' awareness of an organization's adoption of green market orientation embedded in strategic green market orientation, tactical green market orientation, and internal green market orientation significantly affect their consumption attitudes leading to the success of an organization's new product.

The adoption and implementation of strategic orientations such as green market orientation is dependent on the level of an organization's entrepreneurial orientation. Niu et al. (2020) suggested that a stronger level of entrepreneurial orientation encourages organizations to possess a forward and open-minded attitude and be sensitive to its external environment. Entrepreneurial orientation is seen as an important determinant of organizational performance (Wales et al., 2013). For instance, a study conducted by Avlonitis and Salavou (2007) found entrepreneurial orientation to influence new product development. Also, Kam-Sing Wong (2014) also found entrepreneurial orientation to have a positive influence on new product performance. Since, entrepreneurial orientation is the willingness of firms to embrace innovation, take risk, and be proactive toward issues that concerns the survival of the firm, adopting green market orientation in an era of increasing green awareness culture is dependent on the level of the firm's entrepreneurial orientation. Consequently, we contend that higher level of entrepreneurial orientation encourages strategic sustainable business culture (strategic green market orientation, tactical green market orientation and internal green market orientation) and backs the progress of EMNEs in pursuance of sustainable business objectives. Hence, entrepreneurial orientation can influence the adoption of green market orientation leading to new product performance.

The uncertainty of a short- and long-term decisions require stronger level of entrepreneurial orientation to see it through. The readiness of the firm to provide the relevant resources to implement green market orientation to achieve new product performance is further strengthened by a higher level of the firm's entrepreneurial orientation. Regarding the earlier discussions on the dimensions of green market orientation, thus strategic green market orientation, tactical green market orientation, and internal green market orientation, this study deduced that communication of green friendly product influenced by entrepreneurial orientation enhances new product performance. The willingness of top management to provide leadership regarding green market orientation depend on the degree of the firm's entrepreneurial orientation. Lastly, firms' ability to depart from the traditional approach of increased sales and profit maximization, venturing into uncertain environment and the foresight to adopt strategies that tend to meet societal expectations relies on the level of the firm's entrepreneurial orientation. The current study therefore believes that the organization-wide pollination of the corporate green culture and the influence of entrepreneurial orientation will ensure the success of a new product that is green friendly. We therefore proposed the following hypotheses:

- H4** *Entrepreneurial orientation moderates the relationship between strategic green market orientation and new product performance, such that the higher (lower) entrepreneurial orientation, the stronger (weaker) the relationship between strategic green market orientation and new product performance.*

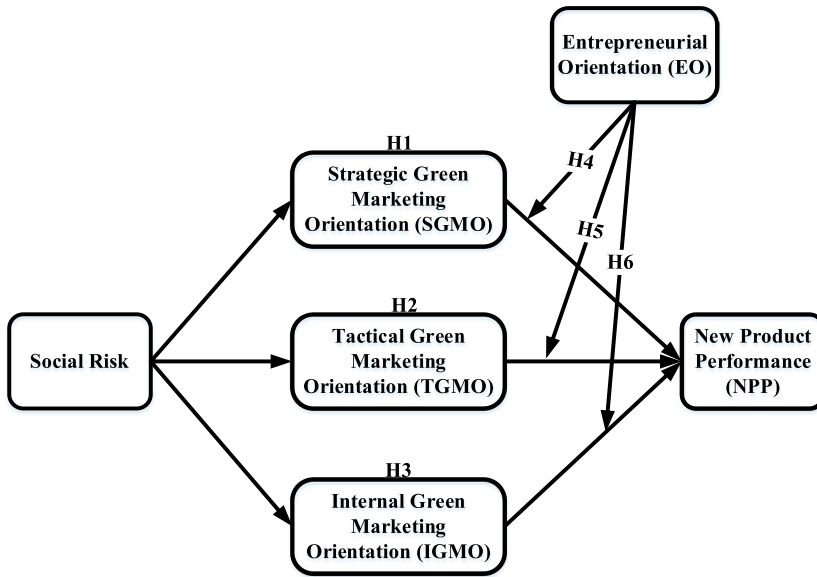


FIGURE 1 Conceptual framework

- H5** *Entrepreneurial orientation moderates the relationship between tactical green market orientation and new product performance, such that the higher (lower) entrepreneurial orientation, the stronger (weaker) the relationship between tactical green market orientation and new product performance.*
- H6** *Entrepreneurial orientation moderates the relationship between internal green market orientation and new product performance, such that the higher (lower) entrepreneurial orientation, the stronger (weaker) the relationship between internal green market orientation and new product performance.*

Figure 1 provides the conceptual framework for the present study.

### 3 | METHOD

#### 3.1 | Data collection and sample

The list of EMNEs operating in Ghana, were compiled from the database of Ghana Investment Promotion Centre (GIPC), with the company name, country of origin, registration date in Ghana, contact details (fax, email, phone, physical location, and address), among others. Based on the available details, we were able to identify the manufacturing firms, which had operated for a minimum of 5 years. Using simple random sampling technique, 1000 manufacturing EMNEs were selected for the study. The study adopted e-questionnaire, which was emailed together with the cover letter, to these selected manufacturing EMNEs. The cover letter detailed the purpose of the study, as well as the organizational member expected to respond to the questionnaire. Gentle reminders were sent (through emails and phone calls), and after 8 weeks of data collection, 317 questionnaires were received.

The organizational members who completed the questionnaires were Customer Relationship Managers, Marketing Managers, Operations Managers, and R&D Managers. The firms were



TABLE 1 Firms and Respondents' background

Firms and Respondents' background	Frequency	Percent (%)
<b>Position of respondents</b>	<b>317</b>	<b>100%</b>
Marketing manager	101	31.9
Customer relationship manager	85	26.8
Operations manager	71	22.4
R&D manager	60	18.9
<b>Industry</b>	<b>317</b>	<b>100%</b>
High technology intensive	154	48.6
Low technology intensive	163	51.4
<b>Size</b>	<b>317</b>	<b>100%</b>
50–100 employees	139	43.8
100–200 employees	94	29.7
Employees above 200	84	26.5
<b>Age of firm</b>	<b>317</b>	<b>100%</b>
5–10 years	79	24.9
11–15 years	125	39.4
15–20 years	68	21.5
Above 20 years	45	14.2

classified into low and high technology intensive, based on their operations and industry. As earlier indicated, only firms with minimum of 5 years of operation in Ghana were sampled for the study. The size of firm showed the majority of firms had employees ranging between 50 and 100 employees. Table 1 presents the descriptive statistics of the study.

### 3.2 | Measurements

The four main variables for the study were social risk, green market orientation, entrepreneurial orientation, and new product performance. Green market orientation had three dimensions, which were strategic green market orientation, tactical green market orientation, and internal green market orientation, and these were used independently in this study (not as a composite variable). The measurement items under social risk were adapted from Betts et al. (2015). The measurement items for green market orientation dimensions were adapted from Papadas et al. (2019). Measurement items under entrepreneurial orientation were adapted from Ndubisi and Agarwal (2014), while those of new product performance were adapted from Parkman et al. (2012).

There were three control variables in the study, which were industry (low-tech=0; high-tech=1), size (measured by the number of employees), and age of EMNE in Ghana. The questionnaire also included Socially Desirable Responding (SDR), with measurement items adapted from Borah et al. (2021), but originally developed by Strahan and Gerbasi (1972). The SDR measurement items were “At times you have really insisted on having things your own way,” “There have been occasions when you took advantage of someone,” “You are always willing to admit it when you make a mistake,” “You have never been annoyed when people expressed ideas

very different ‘from your own,’ “You have never deliberately said something that hurt someone's feelings,” “You like to gossip at times,” and “You sometimes try to get even rather than forgive and forget.”

### 3.3 | Common method variance and social desirability bias

There are a number of options in addressing identifying potential Common Method Variance (CMV), but this study used Harman's one-factor test. According to Podsakoff et al. (2003), Harman's one-factor test is based on the assumption that, CMV caused a single factor to have the majority of the covariances among the measurement items. Our results of the Harman's one-factor test showed that the first factor accounted for 31.3% of the variance extracted, indicating there was no potential or real CMV. Leonidou et al. (2013) also suggested partially correlation, as a further check for CMV. By this, a restricted or partial correlation was run, by using SDR as the marker variable. Our analysis showed that the correlation scores for the restricted and unrestricted correlation were not significantly different from each other. It was once again concluded that CMV was not a threat to this study.

### 3.4 | Validity and reliability analysis

As a procedural principle in running Structural Equation Modelling (SEM), the validity and reliability of the data was expected to be ascertained (Bamfo et al., 2018; Hair et al., 2010; Pomegbe et al., 2021). In pursuing this principle, the study run Confirmatory Factor Analysis (CFA) in STATA (v.15), with results presented in Table 2. Both social risk and entrepreneurial orientation were second-order variables, as such, their first-order latent variables were used as their indicators. Results presented showed that retained variables had at least 0.6 as factor loadings. Measurement items with factor loadings less than 5 were deleted, in line with recommendation from Bamfo et al. (2018). Based on Hair et al.'s (2010) recommended fit indices criteria, we conclude our latent variables appropriately fit the data ( $\chi^2 = 29.42[15]$ ;  $p$ -value = 0.325; RMSEA = 0.041; SRMR = 0.054; TLI = 9.621; CFI = 9.525).

Convergent validity was assessed by calculating for Average Variance Extracted (AVE), which defines the uni-dimensionality of the measurement items on their respective constructs. As prescribed by Fornell and Larcker (1981), convergent validity is achieved when AVE score is greater than 0.5. Results presented indicated that all AVEs were larger than 0.5 and, as such, conclude that convergent validity was achieved.

The discriminant validity was presented in Table 3. Discriminant validity was ascertained by comparing the  $\sqrt{AVEs}$  with the related correlation scores. To claim for discriminant validity, the  $\sqrt{AVEs}$  should be larger than the corresponding correlation coefficient (Bamfo et al., 2018). Results pointed out that, the least  $\sqrt{AVEs}$  of 0.763 was larger than the highest correlation score of 0.643. The highest coefficient score was below 0.7, indicating there was no multicollinearity, which could potentially lead to confounding effect (Tabachnick et al., 2007). The variance inflation factors (VIFs) presented in Table 4 also show there were no confounding effects among the variables, as scores were all less than 5 (Bamfo et al., 2018).

## 4 | RESULTS

The estimation of the various paths was done by performing ordinary least squares (OLS) with SPSS (v. 20), which was also adopted by past researchers such as Baron and Kenny (1986),

TABLE 2 Confirmatory factor analysis

<b>Observed, first-order latent and second-order latent variables</b> $\chi^2 = 29.42[15]$ ; $p$ -value = 0.325; RMSEA = 0.041; SRMR = 0.054; TLI = 9.621; CFI = 9.525	<b>Factor loading</b>
<b>Entrepreneurial orientation (EO): CA = 0.885; CR = 0.899; AVE = 0.748</b>	
<b>Innovativeness: CA = 0.892; CR = 0.906; AVE = 0.619</b>	<b>0.861</b>
Our new products/services cause significant change in the industry	0.652
Our organization constantly seeks to find new products/services	0.891
Our organization has introduced many modifications to the existing products/services	0.905
Our organization has introduced many new products/services to the market	0.748
Our organization invests in updating administrative procedures	0.806
We constantly introduce new ways of managing our business	0.682
Management constantly seeks new ways to improve administration systems	$\infty$
<b>Proactiveness: CA = 0.855; CR = 0.872; AVE = 0.577</b>	<b>0.878</b>
We are constantly on the lookout for business that can be acquired	0.774
We are trying ahead of our competitors in responding to market challenges	0.725
We are usually the first to introduce new products/services in the industry	0.771
We constantly seek new opportunities related to the present operations	0.819
We constantly seek opportunities to improve our business performance	0.702
<b>Risk-taking: CA = 0.899; CR = 0.920; AVE = 0.698</b>	<b>0.855</b>
Employees are encouraged to venture into unexplored territories	0.852
In this organization, new venture failure is viewed as a learning experience	0.844
In this organization, uncertainty is treated as a challenge	0.855
Management accepts that certain suggestions may fail when implemented	0.917
Our organization emphasizes opportunity for success rather than chances for failure	0.691
<b>Social risk: CA = 0.912; CR = 0.932; AVE = 0.872</b>	
<i>We risk losing business credibility from the following stakeholders, if we do not operate on sound environmental practices ...</i>	
<b>Primary stakeholders: CA = 0.894; CR = 0.905; AVE = 0.706</b>	<b>1.00</b>
Domestic customers	0.848
Domestic suppliers	0.792
International customers	0.825
International suppliers	0.892
<b>Secondary stakeholders: CA = 0.894; CR = 0.913; AVE = 0.601</b>	<b>0.863</b>
Domestic rivals	0.729
Environmental NGOs	0.828
International agreements	0.817
International rivals	0.732
Local public agencies	0.757
National (and regional) governments	0.711
Press	0.843

(Continues)

TABLE 2 (Continued)

<b>Observed, first-order latent and second-order latent variables</b> $\chi^2 = 29.42[15]$ ; $p$ -value = 0.325; RMSEA = 0.041; SRMR = 0.054; TLI = 9.621; CFI = 9.525	<b>Factor loading</b>
<b>Strategic green marketing orientation (SGMO): CA = 0.895; CR = 0.907; AVE = 0.583</b>	
We engage in dialogue with our stakeholders about environmental aspect of our organization	0.799
We have created a separate department/unit specializing in environmental issues for our organization	0.805
We invest in low-carbon technologies for our production processes	0.781
We invest in R & D programs in order to create environmentally friendly products/services	0.778
We make efforts to use renewable energy sources for our products/services	0.739
We participate in environmental business networks	0.722
We use specific environmental policy for selecting our partners	0.717
We implement market research to detect green needs in the marketplace	∞
Among other target markets, we also target to environmentally-conscious consumers	∞
<b>Tactical green marketing orientation (TGMO): CA = 0.915; CR = 0.923; AVE = 0.706</b>	
We absorb the extra cost of an environmental product/service	0.837
We apply a paperless policy in our procurement where possible	0.728
We encourage the use of e-commerce, because it is more eco-friendly	0.868
We prefer digital communication methods for promoting our products/services, because it is more eco-friendly	0.918
We use recycled or reusable materials in our products/services	0.838
<b>Internal green marketing orientation (IGMO): CA = 0.914; CR = 0.928; AVE = 0.684</b>	
Environmental activities by candidates are a bonus in our recruitment process	0.918
Exemplar environmental behavior is acknowledged and rewarded	0.806
We encourage our employees to use eco-friendly products/services	0.87
We form environmental committees for implementing internal audits of environmental performance	0.839
We have created internal environmental prize competitions that promote eco-friendly behavior	0.783
We organize presentations for our employees to inform them about our green marketing strategy	0.733
Our employees believe in the environmental values of our organization	∞
<b>New product performance (NPP): CA = 0.892; CR = 0.911; AVE = 0.631</b>	
<i>Relative to your firm's objectives for new products, how successful were they from the standpoint of ...</i>	
... customer satisfaction	0.803
... meeting deadlines	0.814
... profitability	0.806
... return on investment	0.775
... strategic fit	0.875
... overall outcome	0.681

Note: Factor loadings for second-order latent variable dimensions are bold and underlined. ∞ = Item deleted due to poor factor loading. CA = Cronbach Alpha; CR = Composite Reliability.

**T A B L E 3** Descriptive and discriminant analysis

<b>Variables</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
Industry (1)	-	-	-	-	-	-	-	-	-	-	-
Size (2)	-	-	0.151	-	-	-	-	-	-	-	-
Age (3)	-	-	0.174*	0.457**	-	-	-	-	-	-	-
Social Risk (4)	3.721	0.957	0.069	0.117	0.176*	<b>0.934</b>	-	-	-	-	-
SGMO (5)	4.181	0.889	0.157*	0.154*	0.523**	0.492**	<b>0.763</b>	-	-	-	-
TGMO (6)	3.852	1.056	0.074	0.118	0.425**	0.612**	0.478**	<b>0.840</b>	-	-	-
IGMO (7)	4.046	0.974	0.172*	0.173*	0.306**	0.455**	0.563**	0.527**	<b>0.827</b>	-	-
EO (8)	3.938	0.982	0.228**	0.275*	0.461**	-0.219*	0.457**	0.472**	0.541**	<b>0.865</b>	-
NPP (9)	4.005	0.858	0.168*	0.317**	0.207*	-0.559**	0.643**	0.522**	0.587**	0.592**	<b>0.794</b>

Note: √AVE are bold and underlined.

\*\**p*-value significant at 1% (0.01).

\**p*-value significant at 5% (0.05).

TABLE 4 Mediation and moderation analysis

Variables	SGMO		TGMO		IGMO		New product performance (NPP)		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	VIF		
Constant	3.489 (4.534**)	1.297 (4.459**)	3.898 (6.024**)	1.633 (3.626**)	2.694 (3.687**)	1.554 (3.863**)			
Industry	0.085 (0.623)	0.154 (1.118)	0.214 (2.06*)	0.176 (1.191)	0.206 (1.429)	0.169 (1.109)	2.152		
Size	0.158 (0.938)	0.108 (1.466)	0.126 (1.731)	0.219 (2.177*)	0.290 (2.185*)	0.115 (1.070)	3.127		
Age	0.153 (1.737)	0.275 (1.975*)	0.237 (2.054*)	0.202 (1.692)	0.139 (2.148*)	0.104 (1.774)	2.981		
Social risk	0.582 (4.687**)	0.474 (3.597**)	0.300 (2.344*)	-0.267 (-2.126*)	-0.137 (-1.471)	-0.208 (-1.612)	1.623		
SGMO						0.418 (2.610*)	0.386 (4.019**)	1.471	
TGMO						0.361 (2.419*)	0.410 (4.319**)	1.563	
IGMO						0.325 (3.873**)	0.290 (2.296*)	1.351	
EO						0.458 (2.536*)	0.450 (3.925**)	1.929	
SGMOxEO								0.331 (4.287**)	2.292
TGMOxEO								0.302 (2.586**)	2.157
IGMOxEO								0.256 (3.224**)	2.287
R <sup>2</sup>	0.433	0.303	0.428	0.0364	0.523	0.573			
F	14.903**	12.583**	5.168**	12.303**	6.699**	17.305**			

Note: *T*-values are in parentheses.

\*\**p*-value significant at 1% (0.01).

\**p*-value significant at 5% (0.05).

Edwards and Lambert (2007) and Hayes (2015). The study hypothesized for three mediating variables (H1—strategic green market orientation; H2—tactical green market orientation; and H3—internal green market orientation), and the analysis was based on the recommended approach by Baron and Kenny (1986). First, the effect of social risk on strategic green market orientation, tactical green market orientation, and internal green market orientation was assessed, and results showed a positive and significant effect in all cases (refer to models 1, 2, and 3 of Table 4). Second, the effect of social risk on new product performance was assessed in the absence of strategic green market orientation, tactical green market orientation and internal green market orientation. Results from (model 4 indicates social risk had a negative and significant effect on new product performance of manufacturing EMNEs). In model 5 where strategic green market orientation, tactical green market orientation and internal green market orientation were added to model 4, the effect of social risk on new product performance was not significant. Since strategic green market orientation, tactical green market orientation and internal green market orientation were all significant in model 5, it is concluded that each fully mediated the relationship



TABLE 5 Sobel's test

Indirect effect	$t_a$	$t_b$	Test statistics	$p$ -value
Social risk → SGMO → NPP	4.687	2.610	2.280	0.023
Social risk → TGMO → NPP	3.597	2.419	2.007	0.045
Social risk → IGMO → NPP	2.344	3.873	2.005	0.045

between social risk and new product performance. Hypotheses 1, 2, and 3 were all accepted for this study, which was supported by the Sobel's test presented in Table 5.

The study also hypothesized that entrepreneurial orientation moderated the relationships between strategic green market orientation and new product performance; tactical green market orientation and new product performance; and internal green market orientation and new product performance. Based on residual centering approach, the interactive terms were calculated. From model 6, the interaction between entrepreneurial orientation and strategic green market orientation (SGMOxEO), entrepreneurial orientation and tactical green market orientation (TGMOxEO), and entrepreneurial orientation and internal green market orientation (IGMOxEO), all had a positive and significant effect on new product performance. We therefore conclude that entrepreneurial orientation played a significant moderating role in those relationships, and subsequently, our Hypotheses 4, 5, and 6 were also accepted.

## 5 | DISCUSSION OF RESULTS

The first set of our hypotheses focused on the mediating role of green market orientation dimensions in the relationship between social risk and new product performance. Findings revealed that social risk had a significant negative effect on the performance of new products. That is, increasing risk from external primary and secondary stakeholder, results in poor performance of new products. Performance of new products is based on market acceptability, which is significantly influenced by social risk. Social risk may lead to boycott of firm's new product, if not produced under environmentally friendly approaches (Borah et al., 2022). Social risk emanates from external stakeholders' disapproval of environmentally unfriendly approach to supply chain, production, distribution, and marketing of firm's products. A solution to this is the adoption of green market orientation. Social risk compels firms to adopt green market orientation (strategic green market orientation, tactical green market orientation, and internal green market orientation) practices (Otchere et al., 2021; Papadas et al., 2017), and while literature suggests green market orientation influence the performance of new products (Borah et al., 2022). Green market orientation is thus a strategic tool in enhancing the performance of new products, in the face of increasing stakeholder pressure.

Strategic green market orientation encompasses an engagement in dialogue with stakeholders about environmental aspect of the firm, creation of a distinct unit or department specializing in environmental issues of the firm, investing in low low-carbon technologies for firm's production processes, investing in R&D to produce environmentally friendly products, making investment in the use of renewable energy sources for productions, participating in environmental business networks, and using specific environmental policy for selecting business partners (Papadas et al., 2019). That is, focusing on long-term policy decisions by top management, which explicitly emphasizes proactive environmental strategies (Aragón-Correa, 1998). Strategic green market orientation enables top management to demonstrate to external stakeholders of their

environmental responsiveness, leading to the acceptance of new products introduced by firms (Stoeckl & Luedicke, 2015).

Tactical green market orientation is characterized by the absorption of extra cost of an environmental product, the adoption of paperless policy during procurement, encouraging the use of e-commerce, using digital communication methods for promoting products, and the usage of reusable or recycled materials in productions (Papadas et al., 2019). Pujari et al. (2003) further presented that tactical green market orientation dimension also focuses on top management realigning their traditional marketing mix to include environmental protection dimensions. Using marketing promotional tools, which communicates environmentally friendly approach, increases the success of new products by nullifying the effect of social risk (Vilkaite-Vaitone & Skackauskiene, 2019). For example, incorporating green marketing mix is said to provide increased brand image, honesty, credibility, transparency, and enhance trust (Padhy & Vishnoi, 2015).

Papadas et al. (2019) identified internal green market orientation to encompass the recruitment of environmentally conscious employees, organizational acknowledgment of exemplar environmental behavior, encouraging employees to use eco-friendly products, putting together an environmental committees for implementing internal audits of environmental performance, instituting internal environmental prize competitions that promote eco-friendly behavior, and organizing presentations for employees to inform them about firm's green marketing strategy. Papadas and Avlonitis (2014) further added that, the internal green market orientation dimension also focused on organization-wide dissemination of the environmental values embedded in the corporate green culture. This helps employees to put up environmental consciousness behavior in production and marketing of new products (Buysse & Verbeke, 2003). Dealing with environmental concerns as internal policy decisions have the tendency of limiting the negative effect of social risk on the firms' new product performance (Mishra et al., 2019).

The second set of hypotheses also focused on the moderating effect of entrepreneurial orientation on the relationships between the dimensions of green market orientation and new product performance. Findings revealed that each of the dimensions of green market orientation had a positive and significant effect on new product performance. Implying that, manufacturing EMNEs with top management that inculcate environmental responsiveness in their long-term strategic goals are able to develop successful new products. Similarly, EMNEs with management focusing on altering the traditional marketing mix to inculcate environmental responsiveness also enjoy acceptance of its new products. Firms having environmental values as an organization-wide culture are able to develop successful new products. The study finds that EMNEs that are more proactive, innovative, and willing to take on risks are more likely to further boost the effects of the various green market orientation dimensions on the success of new products. Entrepreneurial oriented firms that are willing to commit resources to the implementation of strategic environmentally oriented goals will greatly influence the success of new products (Chahal et al., 2014).

From Figure A1, it could be realized that new product performance had the highest score when both strategic green market orientation and entrepreneurial orientation were at their highest point (orange line), while new product performance had the lowest score when both strategic green market orientation and entrepreneurial orientation were at their respective lowest scores (blue line). Similarly, it could be realized from Figure A2 that new product performance had the highest score when both tactical green market orientation and entrepreneurial orientation were at their highest point (orange line), while new product performance had the lowest score when both tactical green market orientation and entrepreneurial orientation were at their respective lowest scores (blue line). Finally, Figure A3 revealed that new product performance had the

highest score when both internal green market orientation and entrepreneurial orientation were at their highest point (orange line), while new product performance had the lowest score when both internal green market orientation and entrepreneurial orientation were at their respective lowest scores (blue line). These support the fact that entrepreneurial orientation significantly moderated the relationships between the three dimensions of green market orientation (on one side) and new product performance on the other side.

## 6 | CONCLUSION AND CONTRIBUTIONS

It was concluded that social risk had a significant negative effect on the performance of EMNEs' new products. This negative effect is, however, nullified by the positive mediating effects of strategic green market orientation, tactical green market orientation, and internal green market orientation. Entrepreneurial orientation also played a significant moderating effect in the relationship between green market orientation dimensions and EMNEs' new product performance.

### 6.1 | Theoretical implications and contributions

Stakeholder theory was the anchor of this study, because social risk was assessed from the viewpoint of external stakeholders (primary and secondary). This present study moves away from the traditional stakeholder pressure studies, by focusing on the risks associated with pressures, and how that potentially influences the performance of new products. Freeman (1984) in contributing to stakeholder theory explained that firms do not operate in isolation but rather interact with individuals and groups for their survival. These interactions put EMNEs at risk, when they do not operate on environmentally sound principle. There are instances where customers (as a stakeholder group) boycotts goods from some firms, because of environmental issues. Social risk therefore is a potential threat to the performance of new products by EMNEs.

The past two decades have witnessed significant rise in green activism and green consciousness (Borah et al., 2021). Rising stakeholder pressure has contributed to stringent environmental laws and policies. Green market orientation has, therefore, become a very strategic tool used by firms meet these environmental regulatory pressures. Green marketing concepts have subsequently gained popularity in recent times; however, very limited studies have paid particular attention to green market orientation. Papadas et al. (2017), for example, conceptualized green market orientation to include strategic green market orientation, tactical green market orientation, and internal green market orientation, without focusing on its effect on firm or product performance. Similarly, Chahal et al. (2014) conceptualized green market orientation to consist of greening the process, green supply chain management, green strategic policy initiative, proactive energy conservation, and green promotion. This present study contributes to theory and literature by presenting the direct effect of green market orientation on new product performance among EMNEs, and the potential mediating effect of green market orientation in the relationship between social risk and green market orientation.

### 6.2 | Managerial implications and contributions

The operations of EMNEs are not just monitored by domestic stakeholders, but internal stakeholders as well. Social risk therefore becomes a greater challenge to the success of new products

introduced by EMNEs. These firms are therefore expected to operate within acceptable norms, to safeguard their brand and image. Firm's actions and inactions significantly influences parent firm's image. Green market orientation becomes a viable strategy EMNEs could use to avert the negative consequences of social risk. New products tend to perform well when firms adopt green market orientation. EMNEs should therefore engage in strategic, tactical, and internal green market orientations, when they need to overcome the negative consequences of social risk.

Green market orientation practices positively influence the success of EMNEs' new product. Thus, companies that adopt green market orientation perceives their new product performance to be higher compared to other firms. However, firms with high entrepreneurial orientation are able to increase the positive effect that green market orientation practices have on new product performance (Appendix A). For EMNEs to fully tap into the potentials of green market orientation, they are expected to be innovative, proactive, and risk-takers. In the face of green market orientation practices, these entrepreneurial orientation practices help firms to enjoy greater success for their new products. EMNEs are therefore expected to adopt creative ways in the introduction of new products, be willing to commit vital resources to ventures in uncertain environment, and also pursue new opportunities that lead to the introduction of new product ahead of the competition in expectation of future demand.

### 6.3 | Limitations and future research suggestions

As with other studies, this study had some limitations. The study focused on Ghana, with its own unique business environmental characteristics. Ghana, just as many developing countries, has poor enforcement of environmental laws and regulations. MNEs from developed countries may choose to relax their green initiatives when operating in developing countries, just to save cost. This study however found that new products of EMNEs tend to perform better when they implement green initiatives such as green market orientation. This implies that green consciousness is gradually gaining ground in developing countries, as established by Hoang et al. (2019). The adaption of the findings of this study should however be made in similar context or cultural characteristics like that of Ghana. As Papadas et al. (2019) suggested, green market orientation is highly regarded as context specific, with unique characteristics.

The present study however did not include any specific type of cultural measure. Future research could therefore be conducted in different cultural and geographic setting. Furthermore, the study could be conducted in multiple countries, by including a measure (variable) for culture, so the specific influence of culture on the outcome of the study could be ascertained.

Papadas et al. (2017) conceptualized green market orientation to include strategic green market orientation, tactical green market orientation, and internal green market orientation. The present study used these dimensions but studied their individual influences, instead of treating green market orientation as a second-order variable. Considering the fact that green market orientation is a relatively new concept, it is imperative that future studies pay particular attention to the composite variable (green market orientation).

The study presented entrepreneurial orientation to moderate the relationship between the green market orientation dimensions and new product performance. Other variables could also potentially influence the green market orientation and new product performance relationship. Future studies could therefore consider the influence of the individual industry variables. For example, the influence of industry environmental reputation on green market orientation and new product performance relationship would be assessed (Menon & Menon, 1997). Other potential variables could be competition and market turbulence.

## CONFLICT OF INTEREST

No conflict of interest.

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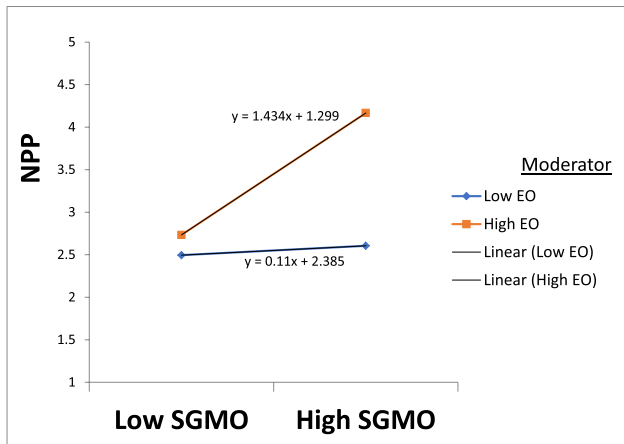
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## APPENDIX A.



**FIGURE A1** Two-way interactions between strategic green market orientation (SGMO) and entrepreneurial orientation (EO) [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/terms-and-conditions)]

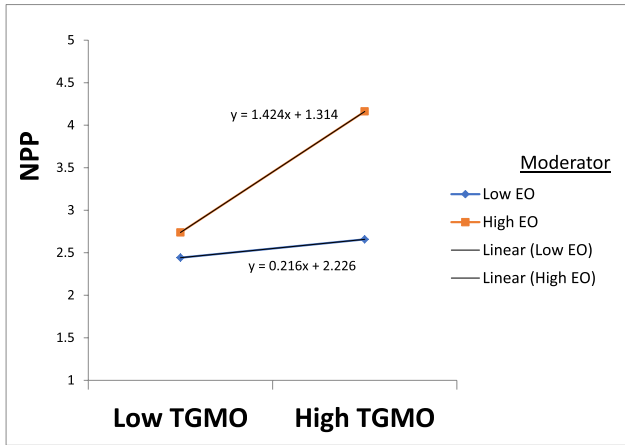


FIGURE A2 Two-way interactions between tactical green market orientation (TGMO) and entrepreneurial orientation (EO)[Color figure can be viewed at wileyonlinelibrary.com]

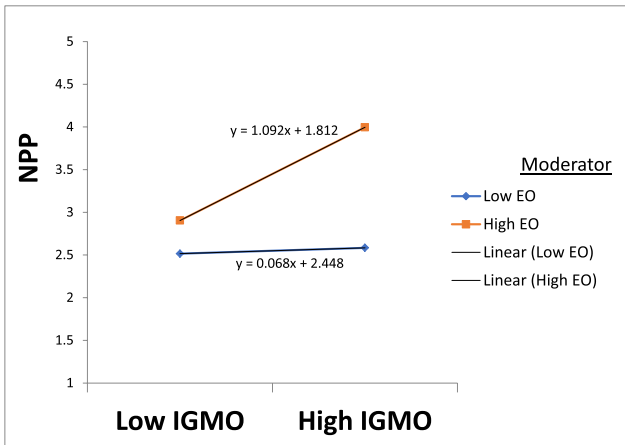


FIGURE A3 Two-way interactions between internal green market orientation (IGMO) and entrepreneurial orientation (EO)[Color figure can be viewed at wileyonlinelibrary.com]