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# **The interplay of strategic and internal green marketing orientation on competitive advantage**

## **ABSTRACT**

This paper seeks to clarify and refine the relationship between strategic and internal green marketing and firm competitiveness. Despite the significance of corporate environmental strategy to firms adopting a triple-bottom line performance evaluation, there is insufficient focus on strategic green marketing and its impact on a firm's competitiveness. This study fills the gap by providing a comprehensive view of strategic green marketing and its impact on competitive advantage. Findings also reveal the moderating role of internal green marketing actions towards the development of a sustained competitive advantage. Specifically, the findings build on contemporary green marketing literature suggesting that a significant interplay between strategy and people exists which enhances the creation of competitive advantage. This in turn increases financial performance. Finally, this research uses an updated approach to build on current literature concerning the drivers and outcomes of strategic green marketing. This provides managers with nuanced insights about environmentally-driven competitive advantage.

**Keywords:** green marketing, environmental, competitive advantage, interplay, environmental culture, marketing strategy

## 1. Introduction

Unlocking the relationship between corporate environmental strategy and firm competitiveness is paramount for contemporary business researchers, policy makers and practitioners (Gibbs & O'Neill, 2016). A green economy that is low carbon, resource efficient and socially inclusive is also the goal of the United Nations Environment Programme (UNEP, 2011). Despite calls for radical, holistic approaches beyond mere technological fixes and product innovation (Geels, McMeekin, Mylan & Southerton, 2015; Lim, 2016) there remains a perceived but unresolved tension between green marketing and competitive advantage. A reluctance to pursue a green marketing orientation (Papadas, Avlonitis & Carrigan, 2017) undermines universal engagement with sustainable business practices, and exacerbates corporate risk and losses. Despite the potential costs involved, the damaging and costly environmental consequences of traditional linear production and consumption are driving more innovative firms to shift their focus to clean production, design for the environment and eco-efficiency (Banerjee, 2017), and pursue resource efficient circular economy (CE) strategies including materials recycling and product repurposing (Moreau, Sahakian, van Griethuysen & Vuille, 2017). CE has also gained momentum in the European Union Circular Economy package (EU, 2015) and Chinese law. There is no alternative to sustainable development and yet many companies remain convinced that their competitiveness will be eroded if they become more environmentally-friendly (Nidumolu, Prahalad & Rangaswami, 2009). Further, much research in marketing remains data rather than theory driven (Hult, 2011; Webster, 2009). This hinders progress and leads to fragmented understanding of environmental concerns in marketing. A gap exists for a sound theoretical approach to provide a holistic understanding of the intersection between green marketing and competitiveness. Such an advance in knowledge not only presents theoretical support for future empirical investigation, but also provides legitimacy for managers facing

resistance to the adoption of a green marketing orientation. This paper addresses that theoretical gap.

Over the last few decades, researchers have increasingly focused upon environmental/green marketing which now represents a critical concept in marketing/management literature (e.g. Chamorro, Rubio & Miranda, 2009; Dangelico & Vocalelli, 2017; Polonsky, 2011). Research suggests that environmental strategy adds value to organizations, but requires integration into the corporate strategy if obligations towards sustainability are to be achieved (Banerjee, Iyer, & Kashyap, 2003; Menon & Menon, 1997; Polonsky, 1995; Porter & van de Linde, 1995). Furthermore, several studies stress the importance of implementing an environmental strategy that could also yield strong competitive advantage and profitability in the longer term (e.g. Leonidou, Katsikeas & Morgan, 2013). Despite the above environmental strategy research streams, empirically little is known about the relationship between contemporary green marketing strategy and a firm's competitiveness. Although previous research identifies links between environmental/green marketing and business performance (e.g. Baker & Shinkula, 2005; Miles & Covin 2000), surprisingly few studies examine environmentally-driven competitive advantage (Leonidou & Leonidou, 2011). Considering that competitive advantage is a strategic, long-term objective, its examination under a strategic green marketing approach constitutes a significant research gap and opportunity.

This paper seeks to clarify and refine the relationship between strategic and internal green marketing and firm competitiveness, achieving several theoretical and managerial contributions. Firstly, it extends the extant evidence regarding the importance of corporate environmental integration and stakeholder pressure to drive green marketing strategy. Secondly, it addresses a critical knowledge gap by extending our understanding of the green

marketing-competitiveness relationship, uniquely revealing the effect of a holistic, strategic green marketing approach on competitive advantage. Confirming the mediating effect of strategic green marketing on financial performance through competitive advantage, this study extends our knowledge by underlining the dual positive effect of strategic green marketing on competitiveness and financial performance. Finally, while exploring the moderating effect of internal green marketing orientation on the strategic green marketing orientation - competitive advantage relationship, this study extends past investigations by being first to analyze how strategic and internal green marketing interplays to affect competitiveness, and signals the value of examining the different elements of green marketing strategy on competitiveness. The findings advocate an embedded culture where organizational activities are directly influenced by green marketing principles. For managers, the positive effect on competitiveness and profit evidenced by the study reveals the value of committing to long term investment in green marketing initiatives, and the distinctive positioning that results from doing so. The findings also suggest that to drive future improved performance, managers should leverage stakeholder pressures for green marketing commitment and excellence. Importantly, the results uncover the interplay of strategic and internal green marketing initiatives highlighting the importance of strategy and people towards firm competitiveness. Finally, the empirically-tested conceptual framework provides managers with tangible evidence of the sustainable competitive advantage to be enhanced from the adoption of a holistic green marketing orientation. This should go some way to moderate the unresolved tension managers perceive between green marketing and firm competitiveness.

## **2. Literature review and hypotheses development**

Our research contributes to the green marketing literature by shedding light on a contemporary but unexplored relationship. Table 1 provides an overview of past related research in the field which reflects the need to provide a contemporary research framework

that offers a strategic approach to the link between green marketing and competitive advantage. Previous research mostly focuses on environmental/green marketing strategy and its relationship with firm performance outcomes other than firm's competitiveness (e.g. Pujari, Wright & Peattie, 2003; Fraj-Andres, Martinez-Salinas & Matute-Vallejo, 2009). A few studies examined the link between environmental/green strategy and competitive advantage, but without sufficiently capturing the role of strategic green marketing, and without incorporating any internal green marketing actions targeted to employees (e.g. Sharma & Vrederburg, 1998). In addition, some of the key findings of the literature include the relationship between stakeholders' pressures (e.g. Buysse & Verbeke, 2003) and environmental/green strategy, as well as the positive association of competitive advantage with green product and process innovation (Chen et al., 2006).

Table 1 here.

The underlying theoretical framework in this paper builds on green marketing orientation (GMO) theory (Papadas et al., 2017) and the concepts of corporate social responsibility, stakeholders' environmental pressures, competitive advantage and financial performance. The study focuses on green marketing from a corporate-wide perspective, also capturing the modern strategic and internal initiatives of an organization towards a holistic green marketing strategy (Banerjee 2002; Menon & Menon, 1997). To conceptualize how the different factors fit together and interrelate, a brief review of the extant literature is presented next.

### *2.1. Strategic green marketing orientation*

Peattie (1995) defines green marketing as "*the holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way*", whilst Banerjee et al. (2003) analyze the greening of

strategic marketing with implications for marketing theory and practice. Likewise, Polonsky & Rosenberg (2001) introduce a breakthrough conceptual framework focusing on a strategic marketing approach and its hierarchical levels. In general, strategic green marketing refers to long-term, top management actions and policies specifically focusing on corporate environmental strategy (Banerjee, 2002), proactive environmental strategies (Aragón-Correa, 1998) and external environmental stakeholders (Polonsky, 1995). Menon & Menon (1997) conceptualize enviropreneurial marketing as a multiple stakeholder view of green marketing defined as “*the process for formulating and implementing entrepreneurial and environmentally beneficial activities with the goal of creating revenue by providing exchanges that satisfy firm’s economic and social performance objectives*” (p. 54). Strategic enviropreneurial initiatives reflect social responsibility and a desire to align marketing activities with the expectations of current and future stakeholders. Furthermore, enviropreneurial marketing decisions create long-term, corporate-wide activities for environmental sustainability (Charter & Polonsky, 1999), attempting to integrate environmental goals and interests with the strategic concern of achieving competitive advantage within current business and markets (Shrivastava, 1995). Finally, Papadas, Avlonitis & Carrigan (2017) summarize the pertinent literature and conceptualize strategic green marketing orientation (SGMO) as the extent to which an organization integrates the environmental imperative in its strategic marketing decisions. For example, partnerships and collaborations with organizations that pursue relevant environmental policies would constitute a strategic green marketing action.

Banerjee (2002) states such integration of green values into the firm's corporate strategy is a response to those that challenge the traditional marketing orientation of increased sales and profit maximization. Research that questions a marketing ideology of escalating consumption is gaining traction, recognizing how such positioning conflicts with

sustainability and responsibility (Crane, Palazzo, Spence & Matten, 2014). This requires firms to widen their marketing scope and include the protection of social stakeholders and the natural environment among their strategic marketing objectives, referred to as the triple bottom line of economic, social and environmental performance (Stoeckl & Luedicke, 2015). Environmental proactivity supports that orientation since adopting environmental protection strategies that go beyond legal compliance is a significant step further (Sharma & Vredenburg, 1998).

## *2.2. Corporate social responsibility, stakeholders' environmental pressures and strategic green marketing orientation*

The topic of Corporate Social Responsibility (CSR) is receiving growing attention in the academic literature consistent with the growing role that CSR plays in business (Campbell, 2007). Increasingly CSR policy includes actions such as promoting the advantages of eco-friendly products and developing environmental awareness (Rashid, Rahman & Khalid, 2014). Therefore, CSR has become a fundamental decision bolstering corporate environmental behavior (Kärnä, Hansen & Juslin, 2003).

A prevailing understanding of CSR is derived from the notion of stakeholders' expectations (Carroll, 1979), which are fundamental to strategic marketing (Balmer & Greyser, 2006). In addition, marketing scholars link CSR and marketing to extend the function of CSR in an organization (Maignan & Ferrell, 2004; Maignan, Ferrel & Farrel, 2005). Podnar & Golob (2007) position CSR as a strategic tool shifting the focus from consumer marketing to corporate marketing. This idea is not new in the marketing literature as Kotler and Levy (1969) first attempted to integrate societal dimensions into the marketing concept. This led to the conceptualization of "holistic marketing" which embraces a stakeholder view of marketing and CSR aspects (Kotler & Keller, 2006). Thus, an organization that truly embraces environmental protection and sustainability requires an



organizational and consistent strategic marketing approach (Kotler, 2011). CSR activities can provide advantages to an organization, facilitating other important corporate objectives such as customer and employee retention (Kärnä et al., 2003). Furthermore, Menguc & Ozanne (2010) find that a firm's orientation to the natural environment links internal strategic resources, such as CSR and environmental commitment. Firms adopting such an orientation recognize the importance of environmental preservation and integrate environmental values within strategic marketing planning (Fraj et al., 2009). We thus hypothesize that:

**H1.** Corporate social responsibility is positively associated with strategic green marketing orientation.

Buyse & Verbeke (2003) show that stakeholder pressures result in significant motivation for organizations to adopt environmental practices. Based on institutional theory, stakeholder engagement is important in order for companies to establish social legitimacy (Sarkis, Gonzalez-Torre & Adenso-Diaz 2010). Therefore, when stakeholders' environmental pressures (SEP) exist, improving social legitimacy in the eyes of its stakeholders can moderate the degree to which firms implement a proactive environmental strategy (Oliver, 1991). Past studies also find that firms have different environmental responses according to the stakeholders that they consider to be the most important (Henriques & Sadorsky, 1999; Sharma & Henriques, 2005). The green management/marketing literature lists many different stakeholder groups that organizations should consider before designing a green marketing strategy. These groups include: employees, investors, suppliers, legislators, governmental agencies, shareholders, competitors and the general public as well as environmental groups, the media and labor unions (Coddington, 1992).

In general, stakeholders can be either internal or external affecting the adoption of strategic environmental practices. In particular, employees as the main internal stakeholders are the fundamental initiators of an organization's proactive environmental activities (Daily

& Huang, 2001; Hanna, Newman & Johnson, 2000). Regulatory bodies and government (Freeman, 1984) are external stakeholders and most typically associated with coercive pressures (Zhu & Sarkis, 2007). Companies may utilize proactive environmental practices to address such pressures (Backer, 2007), which can also manifest in the form of voluntary strategic initiatives for actions such as pollution prevention or deforestation (Sarkis et al., 2009). By implementing strategic environmental practices, organizations may form partnerships with governmental bodies (Darnall, 2006). Other external stakeholder pressures are exerted by non-governmental organizations and the community such as environmental groups, neighborhood groups, the media and labor unions (Hoffman, 2000). Client stakeholders also affect the adoption of environmental practices because they require that suppliers adhere to certain practices and improve their environmental performance (Lee & Klassen, 2008).

Companies should also understand how factors such as product development, promotional mix, support services, manufacturing and production processes, R&D, material purchasing and waste disposal activities affect stakeholders' interest in green marketing strategies (Petkus & Woodruff, 1992). Finally, previous studies show that environmental responses to stakeholders can be classified along a continuum of environmental strategy (e.g. Buysse & Verbeke, 2003; Murillo-Luna, Garce-Ayerbe & Rivera-Torres, 2008) and consequently, pressure from any stakeholder has a positive impact on the intensity of this strategy (Henriques & Sadosky, 1999). Thus, we hypothesize that:

**H2.** Stakeholders' environmental pressures are positively associated with strategic green marketing orientation.

### *2.3. Strategic green marketing orientation, competitive advantage and financial performance*

Preserving the world's biosphere is a business imperative if finite resources are to be protected (Unruh, 2008). Safeguarding the environment also represents an opportunity for businesses of all sectors to innovate. Therefore, firms invest in environmental strategies (i.e. reduction of carbon footprint; reverse logistics systems) to tackle environmental issues such as climate change and deforestation (Sharma & Vredenburg, 1998). However, companies employ different managerial approaches toward environmental challenges often categorized in a linear manner that ranges from reactive to proactive behaviors (Delmas, Hoffman & Kuss, 2001; Fraj, Matute & Melero; 2015). In particular, reactive behaviors are short-term actions that adapt the corporate strategy to environmental regulations, while proactive behaviors require companies to move beyond the minimum expectation and voluntarily implement strategic initiatives to protect and preserve the natural environment (Aragon-Correa & Sharma, 2003). Thus, such strategic actions indicate the degree to which an organization is committed to tackle environmental issues through the development of innovative practices (Buysse & Verbeke, 2003).

Previous research shows that proactive environmental strategy offers companies competitive advantages because it allows the deployment of rare, unique and complex capabilities that help firms to differentiate (Hart, 1995; Miles & Covin, 2000). Porter & van de Linde (1995) suggest that competitive advantage (CA) is driven by environmental performance resulting either from innovations or from adopting a strategic environmental management model. For instance, past studies show that green product and/or green process innovations are positively related with the creation of CA (Sharma & Vredenburg, 1998; Chen, Lai & Wen, 2006; Leonidou, Fotiadis, Christodoulides, Spyropoulou & Katsikeas 2015). Furthermore, proactive environmental strategy includes the implementation of strategic processes such as the research and development of green products and recycling

systems (Aragon-Correa, 1998).

Apart from differentiation, the above capabilities are also linked with cost-advantages (Shrivastava, 1995). Cost-reductions may result from savings in the organization due to the reduction of energy and water consumption or even the adoption of recycling programs (Miles & Covin, 2000). Moreover, cost-related advantages may appear from the achievement of economies of scale by the increasing acceptance of green products (Menon & Menon, 1997; Kotler, 2011). Finally, strategic green marketing actions such as partnerships and collaborations with key stakeholders towards the preservation of the natural environment may also result in cost-driven CA (Zeithaml & Zeithaml, 1984; Leonidou et al., 2015).

As such, previous literature affirms the existence of CA from the implementation of strategic green marketing initiatives through cost reductions and innovative practices (Delmas et al., 2011; Menguc, Auh & Ozanne, 2010). Thus, we hypothesize that:

**H3a.** Strategic green marketing orientation has a positive effect on competitive advantage.

Prior research suggests that environmental strategies reward the financial performance (FP) of a firm (Klassen & McLaughlin, 1996). A potential explanation for a positive association between environmental strategy, CA, and FP is that environmental management becomes a source of a sustainable CA for some firms through a layering of both differential and cost based positions (Bonifant, Arnold & Long, 1995). Notably, previous studies support the mediation effect of CA on the relationship between green marketing strategy and FP (e.g. Leonidou et al., 2015; González-Benito & González-Benito, 2005).

In addition, past literature suggests that when environmental management is integrated within the strategic planning process, there is a positive effect on the firm's financial performance (Klassen & McLaughlin, 1996; Porter & van de Linde, 1995; Russo & Fouts,

1997). A few studies have shown that green marketing strategy has a positive impact on financial performance (e.g. Baker & Sinkula, 2005; Menon & Menon, 1997; Pujari et al., 2003). Finally, the positive effect of CA on FP is supported by several studies in the marketing/management literature (e.g. Jennings & Beaver, 1997; Porter & Kramer, 2006). For instance, McGuire, Sundgren & Schneeweis (1988) found a positive relationship between a firm's reputation and financial returns, while reputation was also found to positively impact FP (Russo & Fouts, 1997). We therefore, hypothesize that:

**H3b.** Strategic green marketing orientation has a positive effect on financial performance through competitive advantage.

#### *2.4. The moderating role of internal green marketing orientation*

Internal green marketing orientation (IGMO) involves the pollination of environmental values across the organization to embed a wider corporate green culture (Papadas & Avlonitis, 2014). Such actions include employee training, efforts to promote environmental awareness inside the organization (Charter & Polonsky, 1999) and environmental leadership activities (Ramus, 2001). Disseminating knowledge and embedding an environmental culture throughout the entire organization encourages employees to develop skills and abilities to implement successful environmental strategies (McDonagh & Prothero, 2014).

Environmental awareness education and training across the whole organization can also create environmental champions for the organization (McDaniel & Rylander, 1993).

From an internally driven perspective, top management behaviors in environmentally proactive companies include: communicating and addressing critical environmental issues; initiating environmental programs and policies; rewarding employees for environmental improvements; and contributing organizational resources to environmental initiatives (Menguc et al., 2010). IGMO indicates that firms should align their green marketing strategy

with the behavior of their employees who are expected to serve and implement it. In other words, it is an internal green marketing strategy which is related to the environmental culture that should pervade the whole organization. In general, IGMO reflects the level of assimilation of corporate environmental values by all internal stakeholders (Papadas et al., 2017).

Based on resourced-based view theory, an enhanced corporate culture can be viewed as one of the key resources to generate sustainable CA (Barney, 1986). Therefore, corporate environmental ethics represents a superior corporate culture to attain sustainable development (Chang, 2011). Chen (2008) introduces the concept of green human capital as the summation of knowledge, skills, innovation and capabilities of employees to reach organizational goals about environmental protection or green innovation. In addition, a strong environmental culture may help firms to improve their environmental marketing strategies towards business performance outcomes (Fraj et al., 2009).

Finally, cultivating employees' culture of sustainability encourages their more efficient participation in total quality management processes and innovative production (Lee, Lee & Pennings, 2001). Gupta and Kumar (2013) suggest that when green initiatives become part of the corporate culture, they provide opportunities for superior performance to different functions of the organization such as marketing and management. For instance, internal green initiatives help the management team to involve every employee to adopt green actions and benefit from the outcomes of that adoption in terms of increased profits through reduced costs (Bansal & Roth, 2000). This implementation drives operations to efficiently use resources and manage waste which helps marketers to create differentiation by improving the reputation of their company (Shrivastava, 1995). Research defines IGMO as a distinct green marketing orientation dimension (Papadas et al., p. 244) which means that it can function

separately, if not co-existing with other GMO dimensions, such as SGMO. Therefore, we hypothesize that:

**H4.** The positive effect of strategic green marketing orientation on competitive advantage becomes more positive when internal green marketing orientation is greater.

Fig. 1 presents the conceptual framework of the study, which consists of four major parts: antecedents (i.e. CSR and SEP), SGMO, performance outcomes (i.e. CA & FP) and IGMO as a moderator.

Figure 1 here.

### **3. Methods**

#### *3.1. Setting*

Greece is the chosen context of this study for three main reasons: (1) green marketing policies are likely to emerge as Greece has one of the worst records on greenhouse gas emissions during the last decade (Nantsou, Prodromou & Mantzaris, 2015), (2) many domestic and multinational firms based in Greece are increasingly adopting environmental management/marketing practices, and (3) the commitment of the Greek government to implement specific OECD environmental recommendations as part of the recent macroeconomic adjustment programs means all firms experience high regulatory pressures. We focused on five different industry groupings for generalizability purposes (i.e. Fast-Moving Consumer Goods, Industrial Products, Services, Wholesalers-Retailers and Remaking-Construction-Other).

#### *3.2. Survey*

##### *3.2.1. Sample and data collection*

Based on a systematic literature review, we drafted a questionnaire that was refined with personal interviews undertaken with six professionals and four researchers who had

extensive experience in the sustainability/green marketing field. Then, we pretested the questionnaire with a survey circulated to 62 marketing professionals attending a part-time executive postgraduate program at a local university (see Appendix 1 for respondents' characteristics). Finally, we undertook a large quantitative study to test our hypotheses. A representative proportion from each sector (B2B and B2C) was desirable, and large firms with a turnover > 10 m. Euros were included in the study population to guarantee the existence of some form of environmental policy. To satisfy our criteria, we used a list of 1596 firms from the database of a Gallup subsidiary in Greece as a sampling frame. A stratified sample of 700 firms was selected from these companies. A web-based survey procedure was used for data collection, through which questionnaires were distributed to CEO's, Marketing or Sustainability/CSR managers from the selected firms (see Appendix 2 for sample characteristics). Participants' names and contact details were confirmed through telephone contact with the relevant company. A formal covering letter was then sent to the personal e-mail of the participant, providing a brief introduction and a general explanation of the study. From the 700 questionnaires sent, 263 questionnaires were returned, but we dropped 37 because of substantially incomplete data. Thus, 226 usable questionnaires represented a 32.3% response rate.

### 3.2.2. *Measures*

Multi-item measures with a 7-point Likert scale (1=strongly disagree, 7=strongly agree) were used to assess all constructs. The CSR construct captures the essential activities relating to the protection of the environment, society and future generations and was measured from Turker (2009) with 7 items. A 6-item scale was used from Sarkis et al. (2010) to measure SEP. SGMO was measured with a 9 item-scale by Papadas et al. (2017). According to the argument that CA can be measured by subjective data (Spanos & Lioukas, 2001), this study measures CA with 6 questions from Chang (2011). Finally, perceived FP is



measured with 5 items adapted from Morgan, Kaleka & Katsikeas (2004) relative to the firms' stated objectives (e.g. Moorman & Rust, 1999; Park, Auh, Maher, & Singhapakdi, 2012). The 7-item IGMO scale from Papadas et al. (2017) was chosen to measure the level of assimilation of corporate environmental values by all internal stakeholders. This measure focuses on the environmental activities of the employees as well as internal actions towards environmental training and excellence.

### *3.2.3. Non-response bias*

Possible non-response bias was investigated following the method recommended by Armstrong & Overton (1977). The data set was divided into two halves, based on the median return date, and the answers of early and late respondents were compared. The rationale for this procedure is that late respondents may be more similar to non-respondents than are early respondents. However, based on t-tests analyses, no significant differences were found between early and late respondents on key measures of the study. Thus, non-response bias does not seem to be a concern.

### *3.2.4. Common method bias*

We used the Harman's one-factor test (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) to address the issue of common method variance. The basic assumption of this technique is that if a substantial amount of common method variance is present, either a single factor will emerge from the factor analysis or one general factor will account for the majority of the covariance among the measures. By applying this test in our study, common method variance does not appear to be a problem, since the first factor did not account for the majority of the variance (only 37.11%).

### *3.2.5. Social desirability bias*

Questionnaire-based research is often subject to socially desirable responding (SDR),

which is a response style that reflects participants' tendencies to provide favorable responses with respect to norms (Steenkamp, de Jong, & Baumgartner, 2010). Today, being a green marketing-oriented organization might be perceived as a socially desirable attribute, and therefore SDR may potentially affect answers to a questionnaire such as ours. To measure SDR, we used Strahan and Gerbasi's (1972) Form X1 (see Appendix 3), which is a short version of the Crowne-Marlowe social desirability scale (1960). We chose this scale because it is only 7 items, and because Fischer & Fick (1993) rated it as superior to all of the other scales they tested, finding it reliable and strongly correlated with the original scale. To investigate potential confounding effects, we correlated the SDR scale with the SGMO, CA and FP scale (the same methodology used for example by Riefler, Diamantopoulos & Siguaw, 2012). Extremely low and non-significant correlations were found of SDR with both the overall SGMO score ( $r=0.04$ ,  $p>0.05$ ) and the individual SGMO items (correlations ranged from 0.02 to 0.11,  $p>0.05$ ). Similar results were found regarding the correlations of SDR with both the overall CA score ( $r=0.06$ ,  $p>0.05$ ) and the individual CA items (correlations ranged from -0.01 to 0.13,  $p>0.05$ ). Regarding the correlations of SDR with FP, while some of them were significant, all were relatively low both for the overall FP score ( $r=0.14$ ,  $p<0.05$ ) and the individual FP items (correlations ranged from 0.09,  $p>0.1$  to 0.17,  $p<0.05$ ). We also performed a partial correlation analysis between the relevant composite variables to further investigate the issue and found that the pattern of correlations does not change (remains almost the same) after controlling for SDR. These results indicate that socially desirable responses are unlikely to play a role in respondent assessments. To further limit the possibility of social desirability bias in the survey, we carefully avoided direct questions about the consequences of corporate green practices for society (Banerjee, 2002; Leonidou et al., 2013). In summary, there is no evidence that social desirability bias is an issue in our results.

## 4. Results

### 4.1. Measurement model assessment

A confirmatory factor analysis was conducted to test the psychometric properties of all latent construct measures. The measurement model fits the data well ( $\chi^2 = 1,464.739$ ,  $df = 725$ ,  $p < 0.001$ ,  $RMSEA = 0.068$ ,  $CFI = 0.947$ ,  $SRMR = 0.057$ ). Construct validity and reliability were also established as indicated by (a) high Cronbach's alpha coefficients (ranging from 0.864 to 0.937), (b) satisfactory indicator reliabilities (ranging from 0.454 to 0.917), item-to-construct loadings (ranging from 0.608 to 0.910), (c) composite reliabilities (ranging from 0.868 to 0.937) and average variance extracted values (ranging from 0.529 to 0.749) exceeding conventional threshold levels. In addition, discriminant validity for all constructs was also established as demonstrated by AVE values exceeding corresponding squared correlations for all construct pairs (Fornell & Larcker, 1981). Table 2 provides an overview of the measurement model results, while Table 3 shows the scales' relevant means, standard deviations and inter-construct correlations.

Table 2 here.

Table 3 here.

### 4.2. Hypothesis testing

A structural model reflecting the conceptual framework of Fig. 1 was estimated with AMOS 23. We developed the interaction term needed to test the moderating hypothesis (H4) using residual-centering (Lance, 1988), that is, we (a) constructed the product of the composites of SGMO with IGMO ( $SGMO \times IGMO$ ), (b) orthogonalized this product term by retaining the residuals estimated after regressing it on the original variables used to construct it, and (c) used these residuals as the interaction term in the structural model after fixing error variances at levels determined by the original variables' reliabilities (Davvetas & Diamantopoulos, 2017). This approach ensures unbiased estimates of the unique interactive

effects, does not adversely affect the estimation of first-order effects, and eliminates multicollinearity concerns (Little, Bovaird, & Widaman, 2006).

The estimated structural model fits the data well ( $\chi^2 = 1213.233$ ,  $df = 469$ ,  $p < 0.001$ ,  $RMSEA = 0.070$ ,  $CFI = 0.956$ ,  $SRMR = 0.065$ ). Individual path estimates corroborate the findings of prior research on strategic green marketing. More specifically, CSR has a strong positive effect on SGMO ( $\beta = 0.835$ ,  $t = 12.892$ ,  $p < 0.001$ ) and also, SEP has a positive impact on SGMO ( $\beta = 0.123$ ,  $t = 2.044$ ,  $p < 0.05$ ). Our findings also support prior research with regards to competitiveness as CA has a positive effect on FP ( $\beta = 0.378$ ,  $t = 4.856$ ,  $p < 0.001$ ).

Focusing on the main construct of our study, SGMO has a significant effect on CA ( $\beta = 0.220$ ,  $t = 3.190$ ,  $p < 0.001$ ), as well as an indirect positive effect on FP through CA ( $\beta_{SGMO \rightarrow CA \rightarrow FP} = 0.083$ ,  $p < 0.05$ ). Given that the direct effect of SGMO on FP is non-significant ( $p = 0.690$ ), we can infer that CA mediates the impact of SGMO on FP. Besides these (expected) positive influences of SGMO, the results also support the moderating hypothesis by generating significant estimates in the expected direction for the SGMO x IGMO interaction term on CA. More specifically, IGMO intensifies the positive effect of SGMO on competitiveness ( $\beta_{SGMO \times IGMO \rightarrow CA} = 0.168$ ,  $t = 2.123$ ,  $p < 0.05$ ).

Importantly, these estimates are obtained after including three types of statistical controls on the performance outcomes (CA and FP) in the model in order to rule out alternative explanations and minimize sources of variance in the dependent variables attributable to firm characteristics. Specifically, we included (a) a measure of company age (measured in years), (b) a measure of company size (measured in number of employees), and (c) firm sector dummies to account for differences associated with industry category. An overview of model estimation results is presented in Table 4.

Table 4 here.

Although the structural model estimation provides support to all our hypotheses, we also conducted conditional process analysis using bootstrap estimation (Hayes, 2013; PROCESS Model 1 and 4; 5000 resamples) to obtain bias-corrected confidence intervals for the hypothesized effects and probe the hypothesized interaction at different levels of the moderator. After receiving support for our moderation hypothesis (i.e. the interaction effect is significant and in the hypothesized direction) using this alternative estimation approach (PROCESS Model 1), we probed the interaction using an analysis introduced by Johnson & Neyman (1936), dubbed “floodlight” analysis (Spiller, Fitzsimons, Lynch & McClelland, 2013). Given that our moderator (IGMO) is a continuous “arbitrary” variable, we used the Johnson–Neyman technique for identifying regions in the range of the moderator in which the effect of the independent variable on the dependent variable is and is not significant (Hayes & Matthes 2009; Mohr, Lichtenstein & Chris Janiszewski, 2012; Davvetas & Diamantopoulos, 2018). The border between these two regions is known as the Johnson–Neyman point. As shown in Table 5, the Johnson–Neyman point for  $p < 0.05$  ( $t = 1.97$ ) for the IGMO moderator occurs at a value of 2.97 (in the range of a 1-7 scale). This indicates that higher SGMO levels result in significantly higher CA outcomes than lower SGMO levels for all values of IGMO above 2.97, but not for values less than this point. This is further illustrated in the graph of Fig. 2 (Panel A), where the different lines depict the association between IGMO and CA at different levels of SGMO. We can observe that the slopes are positive and get steeper for higher levels of SGMO as the level of IGMO increases, indicating once more the significant moderating effect of IGMO in the SGMO→CA relationship. The result is also illustrated in Fig. 2 (Panel B), where the 95% bootstrapping CIs for the effect include only positive values above the Johnson–Neyman point.

We also received support for our mediation hypothesis through this alternative estimation approach (PROCESS Model 4). SGMO has a significant total effect on FP

( $c=0.159$ ,  $t\text{-value}=3.323$ ). On introducing CA as a mediator, then the effect of SGMO on FP turns non-significant ( $c'=0.057$ ,  $t\text{-value}=1.171$ ), while its indirect effect via CA achieves a point estimate of 0.102 ( $a*b$ ). Since its confidence interval contains no zeros, the indirect effect is significant and CA mediates the influence of SGMO on FP (see Table 6)<sup>1</sup>.

Table 5 here.

Figure 2 here.

Table 6 here.

## 5. Discussion

Given the centrality of sustainability in today's competitive marketplace, the contribution of our research is three-fold: 1) designing a rigorous research methodology, we demonstrate for the first time the application of a strategic approach for green marketing and its positive relationship with competitive advantage; 2) incorporating prior research in the field, we provide a contemporary framework for strategic green marketing based on real life business practice and we extend earlier studies regarding its drivers and outcomes; 3) testing the IGMO scale as a moderator of the SGMO-CA relationship, we uncover the moderating role of people towards the development of a sustained competitive advantage. These results offer a series of useful theoretical and managerial implications which are analyzed below.

### 5.1. Theoretical implications

Since this study constitutes a novel attempt to a) examine the meaning of strategic green marketing on competitiveness, and b) empirically test this relationship under the prism of internal green marketing actions, this work represents a significant contribution to the further development of the environmental/green marketing field. Overall, our results offer four main

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<sup>1</sup> Note that we also confirmed both aforementioned results of moderation and mediation with PROCESS Model 7 estimation, given that the confidence interval of the index of moderated mediation does not contain the value of zero [0.003:0.057], implying a significant moderated mediation.

propositions for theoretical advancement. First, our study extends the findings of earlier studies with regards to the drivers of strategic green marketing. Our findings support a corporate environmental integration approach which is vital to competitive success rather than solely undertaking corporate social/environmental responsibility (Menon & Menon, 1997; Porter & van de Linde, 1995). Our results also confirm prior studies about the positive relationship of stakeholders' pressures with a green marketing strategy (Polonsky, 1995). In addition, by examining the impact of SEP on the SGMO, this study provides additional support for the strategic role of stakeholders in forming a long-term green marketing strategy.

Second, our results extend previous studies on the green marketing-competitiveness relationship (e.g. Miles & Covin, 2000) by providing an updated and comprehensive investigation into the performance implications of a green marketing strategy. Importantly, since past empirical studies rely on the performance implications of green marketing mix-related activities, our study goes beyond this stream of research and reveals for the first time the impact of a holistic, green marketing approach on competitive advantage addressing a critical research gap in the literature (Leonidou & Leonidou, 2011).

Third, the confirmation of the mediation effect of SGMO on financial performance through CA provides support for previous related studies (e.g. Baker & Shinkula, 2005) regarding the impact of such strategies on performance outcomes. Our study also goes one step further and emphasizes the dual positive effect of strategic green marketing on both competitiveness and FP. That is, our findings build on green marketing theory by stressing the importance of being strategically green if competitive advantage and better financial performance are to be achieved.

Fourth, based on these findings, we explore the moderating effect of IGMO on the SGMO-competitive advantage relationship. Although, there is prior research about the

positive relationship of corporate environmental strategy and competitiveness (Chen 2008), the interplay between strategic and internal green marketing on competitiveness has not been studied in the past. Considering that a contemporary green marketing strategy should encompass the whole organization at every level (Kotler, 2011), our findings further corroborate this view by exposing the moderating role of IGMO. Notably, our study sheds light on the value of examining the impact of different elements of green marketing strategy on competitiveness. Whereas, the research in this domain is limited to the focus of a specific aspect of green marketing strategy and its marketing/financial implications (e.g. Leonidou et al., 2013), our results suggest that each of the two green marketing orientation dimensions can have a joint positive impact towards competitive advantage and financial performance. (Fig. 1).

### *5.2. Managerial implications*

The findings have various implications for business practitioners. Firstly, SGMO reflects the value of long-term commitment and investment in green marketing initiatives and given its positive relationship with competitiveness and profitability, it could be also used as a strategic business tool. For example, green marketing initiatives such as investment in low-carbon technology and R & D related projects can be considered as potential objectives in the 5-year business plan of an organization. Moreover, such strategic decisions would help organizations to distinguish themselves from greenwash-driven competitors undertaking superficial gestures to merely improve their corporate image.

Secondly, our results show that CSR may be a forerunner of SGMO, however the latter requires a different approach since it involves strategic marketing-related tasks. In practice, this means that a CSR policy may be necessary but not sufficient for the design and implementation of a green marketing strategy. With regards to stakeholders, major pressure



for changing marketing practices may come from different groups. For instance, today's consumers take into account the environmental commitment and attributes of a company and question to what extent an organization meets its environmental responsibilities (Kotler, 2011). Our findings suggest that stakeholders' pressures drive the adoption of strategic green marketing practices which in turn positively affect performance. As such, managers should turn these pressures into win-win opportunities for stakeholders' satisfaction and green marketing excellence.

Third, our empirically-tested conceptual framework provides managers with a comprehensive view of how SGMO initiatives can enhance competitive advantages based on differentiation. More specifically, since SGMO may not be easily engendered and based on our results, strategic green marketing activities such as participation in environmental business networks (i.e. development of synergies, collaboration in research projects) could help towards the development of sustainable competitive advantage. In practice, an organization can be green and competitive if a strategic direction exists. This assumption has its own implications for the C-level executives who seek to catalyze change within their corporate environmental strategy. Companies that embrace sustainability need to make drastic changes in their strategic marketing practices in order to pursue a green marketing orientation and ultimately, achieve business ethos and performance superiority. For example, investing in developing products that are eco-friendly can help a firm to build better R & D capabilities from its competitors and sustain a competitive advantage.

Finally, our findings reveal an interplay between strategic and internal green marketing initiatives and provide managers with nuanced insights about the approach an organization should employ in order to achieve high levels of competitiveness. This study suggests that strategy and people do matter when pursuing an environmentally-driven competitive

advantage. Thus, a strategic direction that captures the human capital element is broader than any environmental strategy. However, such a goal should be consistent with the values of the company, have a connection to its core business, and of course, elicit personal contributions from its members. To this end, internal green marketing actions could boost the impact of the core green marketing strategy on competitive advantage. For instance, awards that promote eco-friendly behavior and incentives for exemplary environmental employee behavior could contribute towards the development of better managerial capabilities inside the organization as well as help building a culture which differentiates the firm from its competitors. In that way, organizations will eventually create environmental knowledge and competence by making every employee a green champion (Bhattacharya & Polman, 2017).

### *5.3. Limitations and further research*

Our results should be interpreted in light of certain limitations. First, green marketing practices are increasingly recognized as context specific, with their own unique characteristics (McDonagh & Prothero, 2014), suggesting it would be useful, methodologically, to investigate how the proposed framework operates in different cultural, social, economic and political environments, particularly comparing contexts. Second, although the sample representativeness is satisfactory, we acknowledge other areas have more negative environmental impact such as B2B and services; this constitutes another potential limitation of this paper. Thus, we suggest future studies focus on different firm types, specific sectors or industries (e.g. B2B in food versus automobiles), to draw comparative results and better understand how the SGMO-CA relationship operates in different settings. For instance, it would be interesting to examine to what extent industry environmental reputation moderates the impact of strategic green marketing on business performance (Menon & Menon, 1997). We also acknowledge the inequality of our cell sizes in terms of respondents' job title does not permit us to derive valid conclusions regarding the

impact of the respondent's job position on the role and effect of SGMO. It would be interesting for future research efforts to investigate whether the existence of an autonomous CSR department and a well-regarded CSR managerial position inside the company might positively influence the role of SGMO and its impact on organizational outcomes.

Furthermore, the relationship of SGMO on CA (moderated by IGMO) offers evidence to companies regarding one way to achieve CA, but it is by no means exhaustive. CA and other general performance outcomes are affected by several factors and therefore, cannot be fully captured in a single study. Further research could investigate other drivers of CA and their significance compared to strategic green marketing. In addition, further research should focus on investigating the costs involved in green marketing strategies (e.g. clean production costs) and their effect on corporate performance.

From a methodological perspective, we specified the SEP scale as a reflective measurement model, relying on specific Jarvis et al. (2003) criteria (i.e., common theme shared, possibly similar antecedents and consequences, important and significant inter-item correlations). Our decision was also based on the example of how other researchers in the extant literature have specified the scale in equivalent research contexts (e.g., Murillo-Luna, Garces-Ayerbe & Pilar Rivera-Torres, 2008; Vazquez-Brust, Liston-Heyes, Plaza-Ubeda & Burgos-Jimenez, 2010; Sarkis et al., 2010; Garces-Ayerbe, Rivera-Torres & Murillo-Luna, 2012). However, given that the SEP scale could be also viewed as meeting some criteria of formative measurement model specification, it would be valuable to thoroughly investigate in future research efforts the best recommended model specification of this construct<sup>2</sup>.

Based on previous studies (Leonidou et al., 2013), we suggest that slack resources could be a potential driver of both SGMO and IGMO since environmental investments are often

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<sup>2</sup> We thank the Anonymous Reviewer for bringing this issue to our attention.

considered as significant expenditures with long-term payback. Companies with slack resources are sometimes eager to make such investments (Campbell, 2007). In addition, prior research suggests that tactical activities (i.e. use of recycled materials, green pricing policies) offer flexibility to managers for a) improving their firm's green brand image in the short-medium term and b) adjusting their green marketing strategy according to external and internal environmental changes (Papadas, et al., 2017). Therefore, we also encourage future studies to explore the moderating effect of such tactical, short-term green marketing practices on the green marketing strategy-performance relationship, which may act as a “fine-tuning” tool of the core, long-term green marketing strategy.

Finally, given that the overarching aim of any green marketing measure is to reduce the organization's environmental impact, future studies should also include an agreed, global, objective measure of environmental performance (e.g. detailed lifecycle analysis, CO<sub>2</sub> emissions) to identify where the most substantive environmental impacts occur and allow comparisons to be drawn about the benefits of a green marketing strategy on the natural environment. As marketing researchers, we may always be interested to discover whether a green marketing strategy pays-off in business terms, however our main motive in this field should remain the preservation of nature.

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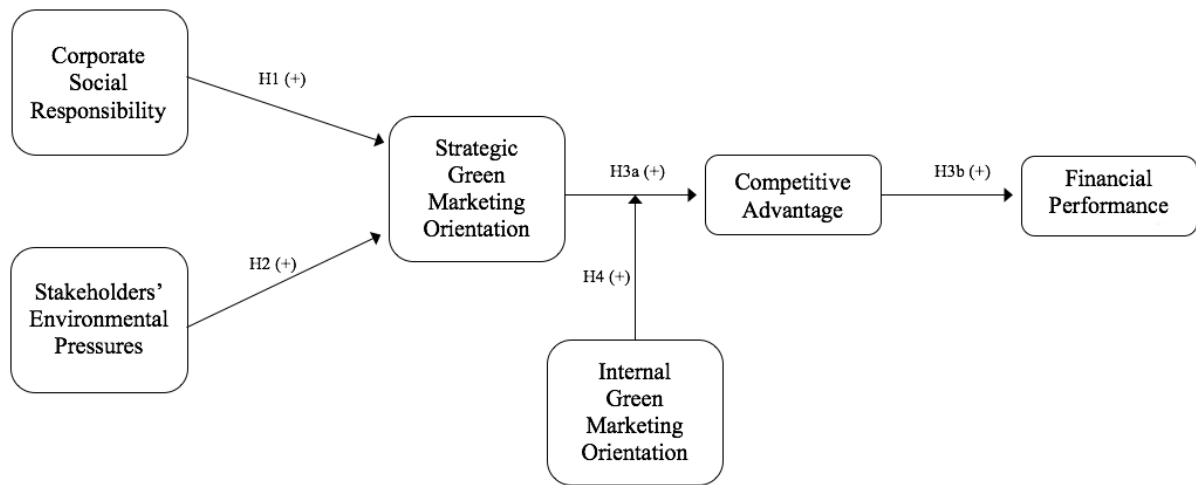
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**Table 1.** Previous empirical research on strategic environmental/green marketing

Study	Context	Strategic Green Marketing variables	Antecedents	Outcome variables	Key findings
Sharma & Vredenburg (1998)	110 oil & gas firms	<i>Proactive environmental responsiveness strategies</i> (e.g. waste management, invest in recycling programs)	-	<i>Firm Competitiveness</i> (e.g. cost reduction, improved operations)	Positive link between proactive environmental strategies and competitive advantage
Buyse & Verbeke (2003)	197 Belgian firms	<i>Resource-based environmental strategy</i> (e.g. invest in 'green' manufacturing process, integration of environmental issues in corporate planning)	-	<i>Perception of regulatory pressures</i> (e.g. suppliers, competitors, NGOs, press)	Firms with proactive environmental strategy attach high importance on stakeholders' pressures
Banerjee et al. (2003)	243 U.S. firms	<i>Corporate environmentalism</i> (e.g. integration of environmental issues in strategic plan)	<i>Competitive advantage; Regulatory pressures</i>	<i>Corporate environmentalism</i>	Competitive advantage and regulatory pressures have strong impact on corporate environmentalism
Pujari et al. (2003)	151 UK manufacturers	<i>Environmental New Product Development</i> (e.g. product experiment, Life-Cycle Analysis)	-	<i>Market Performance</i> (e.g. new markets, ROI)	Environmental NPD positively related to market performance
Chen et al. (2006)	203 Taiwanese information & electronics firms	<i>Green Product Innovation</i> (e.g. choosing materials producing least pollution) <i>Green Process Innovation</i> (e.g. energy saving, waste recycling)	-	<i>Corporate competitive advantage</i> (e.g. low cost, RnD and innovation)	Green product innovation and green process innovation have a positive impact on competitive advantage
Fraj-Andres et al. (2009)	361 Spanish manufacturers	<i>Strategic environmental marketing</i> (e.g. product design, packaging)	<i>Environmental Orientation</i> (e.g. preserving environmental is a central corporate value)	<i>Economic Performance</i> (e.g. profitability)	Strategic and tactical environmental marketing positively influence economic performance
Sarkis et al. (2010)	157 Spanish automobile firms	<i>Environmental Practices</i> (e.g. environmental management systems, source reduction)	<i>Stakeholder Pressures</i> (e.g. pressures from managers, shareholders, partners)	<i>Environmental Practices</i>	The relationship between Natural resource-based view theory view & stakeholders' pressures was further supported
Menguc et al. (2010)	150 New Zealand manufacturers	<i>Proactive environmental strategy</i> (e.g. use of natural resources, environmental initiatives, waste reduction)	<i>Entrepreneurial Orientation</i> (e.g. NPD approach, emphasis on innovation)	<i>Firm performance</i> (e.g. sales growth, profit growth)	Proactive environmental strategy has a positive effect on firm performance
Garce-Ayerbe et al. (2012)	240 Spanish firms	<i>Degree of proactivity of environmental strategy</i> (e.g. total environmental strategy, investing in environmental strategy)	<i>Stakeholders' Pressures</i> (e.g. pressures from managers, shareholders, partners)	<i>Degree of proactivity of environmental strategy</i>	Stakeholders' pressures affect the degree of strategic environmental behavior

Notes: Some of the above studies investigate additional variables, however this table contains only variables which are relevant to the research purpose of the present study.

**Fig. 1.** Conceptual framework

**Table 2.** Measurement model

Construct	Standard loadings ( $\lambda$ )	Mean	Standard Deviation
<b>Corporate Social Responsibility (CSR) - Turker, 2009</b>			
<i>a = .930, CR = .925, AVE = .641</i>			
Our company participates in activities which aim to protect and improve the quality of the natural environment.	0.879	4.92	1.71
Our company implements special programs to minimize its negative impact on the natural environment.	0.855	4.41	1.96
Our company encourages its employees to participate in voluntarily activities.	0.778	3.96	2.03
Our company contributes to campaigns and projects that promote the well-being of the society.	0.716	4.58	1.87
Our company supports non-governmental organizations working in problematic areas.	0.671	4.46	1.95
Our company makes investment to create a better life for future generations.	0.798	4.61	1.96
Our company targets sustainable growth which considers future generations.	0.865	4.84	1.88
<b>Stakeholders' Environmental Pressures (SEP) – Sarkis et al., 2010</b>			
<i>a = .864, CR = .868, AVE = .529</i>			
Client pressure	0.644	5.03	1.71
Government pressure	0.635	4.33	1.82
Shareholders' pressure	0.783	4.73	1.82
Workers' pressure	0.819	4.58	1.61
NGOs/Society pressure	0.853	4.54	1.69
Competitors' pressure	0.588	4.15	1.82
<b>Strategic Green Marketing Orientation (SGMO) – Papadas et al., 2017</b>			
<i>a = .937, CR = .937, AVE = .623</i>			
We invest in R & D programs in order to create environmentally friendly products/services.	0.787	4.15	1.92
We have created a separate department/unit specializing in environmental issues for our organization.	0.755	3.15	2.18
We invest in low-carbon technologies for our production processes.	0.798	4.19	2.02
We participate in environmental business networks.	0.784	3.99	2.05
We use specific environmental policy for selecting our partners.	0.832	3.83	1.90
We engage in dialogue with our stakeholders about environmental aspect of our organization.	0.850	3.67	1.89
We make efforts to use renewable energy sources for our products/services	0.793	4.33	1.93
Among other target markets, we also target to environmentally-conscious consumers.	0.728	4.14	1.90
We implement market research to detect green needs in the marketplace.	0.770	3.38	1.98
<b>Competitive Advantage (CA) – Chang, 2011</b>			
<i>a = .887, CR = .886, AVE = .566</i>			
The quality of the products or services that the company offers is better than that of the competitor's products or services.	0.660	5.40	1.19
The company is more capable of R&D than the competitors.	0.714	5.05	1.37
The company has better managerial capability than the competitors.	0.786	4.98	1.36

The company's profitability is better.	0.751	4.67	1.42
The corporate image of the company is better than that of the competitors.	0.854	5/19	1.38
The competitors are difficult to take the place of the company's competitive advantage.	0.720	4.96	1.50

**Financial Performance (FP) – Morgan et al. (2004)**

$\alpha = .933$ ,  $CR = .936$ ,  $AVE = .749$

Firm's profitability	0.909	4.19	1.35
Sales growth	0.869	4.31	1.38
Firm's economic results	0.958	4.32	1.42
Profit before tax	0.886	4.23	1.41
Market share	0.667	4.63	1.28

**Internal Green Marketing Orientation (IGMO) – Papadas et al., 2017**

$\alpha = .918$ ,  $CR = .917$ ,  $AVE = .616$

We organize presentations for our employees to inform them about our green marketing strategy.	0.861	3.25	1.86
Our employees believe in the environmental values of our organization.	0.850	4.19	1.73
Exemplar environmental behavior is acknowledged and rewarded.	0.833	3.30	1.85
We form environmental committees for implementing internal audits of environmental performance.	0.838	3.03	1.90
Environmental activities by candidates are a bonus in our recruitment process.	0.708	2.73	1.65
We have created internal environmental prize competitions that promote eco-friendly behavior.	0.683	2.43	1.67
We encourage our employees to use eco-friendly products/services.	0.675	4.00	1.91

Notes: All items were measured on 7-point scales, anchored at 1 = "strongly disagree" and 7 = "strongly agree" (apart from FP that was anchored at 1 = "much worse" and 7 = "much better").

$\alpha$ : Cronbach's alpha, CR: Composite reliability, AVE: Average variance extracted.

**Table 3.** Descriptive statistics and correlation matrix.

Construct	Mean	SD	1	2	3	4	5	6
1. CSR	4.54	1.590	<i>0.801</i>					
2. SEP	4.47	1.243	0.718	<i>0.727</i>				
3. SGMO	3.99	1.602	0.721	0.723	<i>0.789</i>			
4. CA	5.04	1.102	0.442	0.326	0.397	<i>0.752</i>		
5. FP	4.33	1.219	0.210	0.205	0.218	0.407	<i>0.865</i>	
6. IGMO	3.31	1.488	0.682	0.653	0.724	0.414	0.174	<i>0.785</i>

Notes: Figures on the diagonal refer to the square root of the average variance extracted of the respective construct. All correlations are significant at the 0.01 level.

**Table 4.** Model estimation results

Structural relationships	Path estimate	t-value	Hypothesis	Result
<i>Hypothesized paths</i>				
CSR → SGMO	0.835	12.892***	H1 (+)	Support
SEP → SGMO	0.123	2.044**	H2 (+)	Support
SGMO → CA	0.220	3.190***	H3a (+)	Support
SGMO → FP ( <i>direct effect</i> )	0.026	0.399		
CA → FP	0.378	4,856***	H3b (+)	Support
SGMO → CA → FP ( <i>indirect effect</i> )	0.083	$p < 0.05$		
SGMO x IGMO → CA	0.168	2,123**	H4 (+)	Support
<i>Controls</i>				
Firm's Size → CA	0.011	0.151		
Firm's Size → FP	0.253	3.676***		
Firm's Age → CA	0.095	1.323		
Firm's Age → FP	-0.122	-1.786		
Sector				
(reference: Construction-Remaking)				
FMCG → CA	0.166	1.672		
FMCG → FP	0.014	0.143		
Services → CA	0.079	0.828		
Services → FP	0.069	0.758		
Industrial Products → CA	-0.071	-0.770		
Industrial Products → FP	0.024	0.275		
Wholesaler/Retailer → CA	0.160	1.811		
Wholesaler/Retailer → FP	0.009	0.102		

*Model fit*

$$\chi^2 = 1213.233, df = 469, RMSEA = 0.070, CFI = 0.956, SRMR = 0.065$$

Notes: The significance of the indirect effect was estimated with bootstrapping 95% confidence interval based on 5000 bootstrap samples (e.g., Hayes, 2009; Preacher & Hayes, 2004).

Although the indirect effect size is small, it can be considered important given its statistical significance, the fact that it is essentially the product of two effects (Kenny, 2018) and is obtained on top of a series of controls on the dependent variable.

\*\*\* $p < 0.001$

\*\* $p < 0.05$

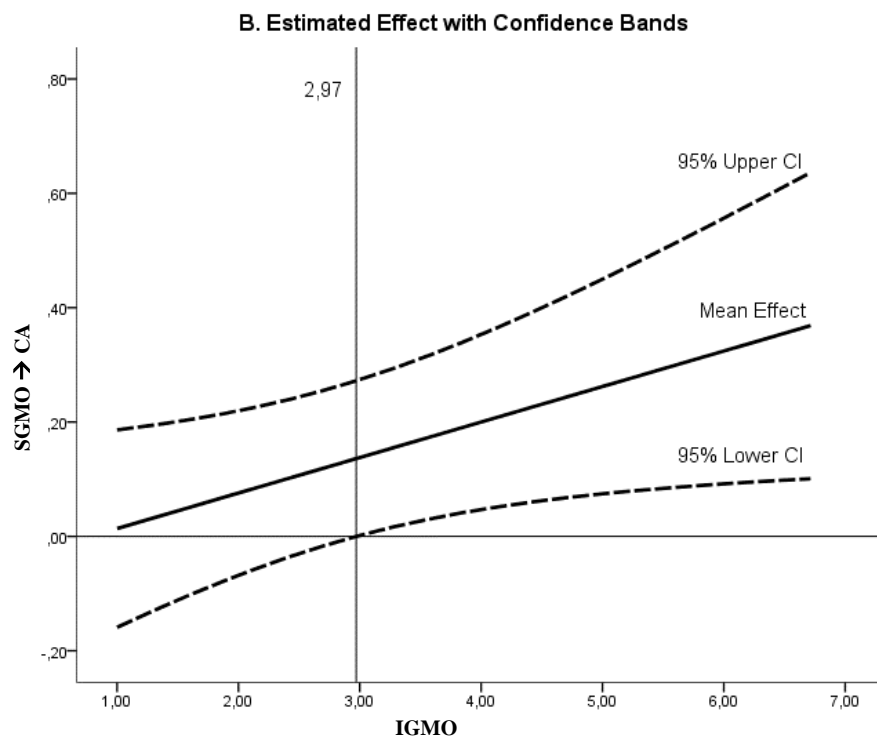
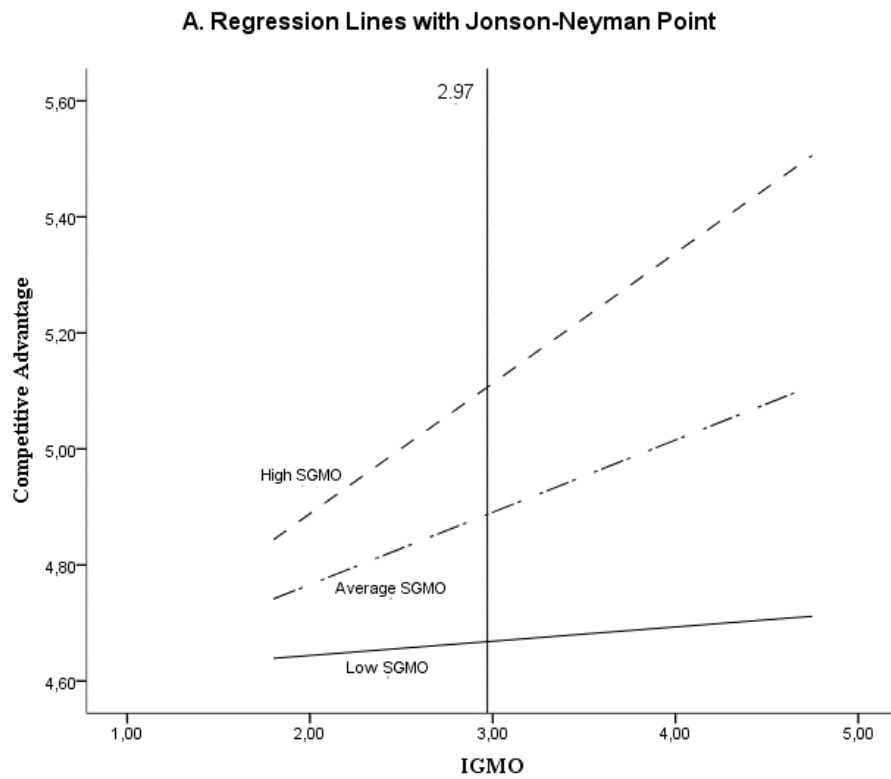


**Table 5.** Conditional effects and bootstrapping 95% confidence intervals.

Conditional effect of SGMO on CA		
IGMO	$\beta_{SGMO \rightarrow CA}$	p [LLCI: ULCI]
1.00	0.01	0.88 [-0.16 : 0.19]
1.29	0.32	0.70 [-0.13 : 0.19]
1.57	0.05	0.53 [-0.10 : 0.20]
1.85	0.07	0.37 [-0.08 : 0.21]
2.14	0.09	0.24 [-0.06 : 0.22]
2.42	0.10	0.14 [-0.04 : 0.24]
2.71	0.12	0.08 [-0.02 : 0.26]
2.97	0.14	0.05 [0.00 : 0.27]
3.00	0.14	p<0.05 [0.01 : 0.28]
3.28	0.16	p<0.05 [0.02 : 0.29]
3.57	0.17	p<0.05 [0.03 : 0.31]
3.85	0.19	p<0.05 [0.04 : 0.34]
4.14	0.21	p<0.01 [0.05 : 0.37]
4.42	0.23	p<0.01 [0.06 : 0.39]
4.71	0.24	p<0.01 [0.07 : 0.42]
5.00	0.26	p<0.01 [0.07 : 0.45]
5.28	0.28	p<0.01 [0.08 : 0.48]
5.57	0.29	p<0.01 [0.09 : 0.51]
5.85	0.32	p<0.01 [0.09 : 0.54]
6.14	0.33	p<0.01 [0.09 : 0.57]
6.43	0.35	p<0.01 [0.10 : 0.60]
6.71	0.37	p<0.01 [0.10 : 0.64]

Notes: bootstrapping confidence intervals estimated with 5000 resamples.  
Effects based on normal theory tests (two-tailed).

**Fig. 2.** Moderating Influences of IGMO on the Relationship between SGMO and Competitive Advantage with Johnson-Neyman point.



**Table 6.** Mediation effect and bootstrapping 95% confidence intervals.

<b>Direct and Indirect effects of SGMO and CA on FP</b>			
	Direct effect	Indirect effect	Total effect
SGMO	0.057 [-0.039 : 0.156]	0.102* [0.058 : 0.165]	0.159** [0.062 : 0.257]
CA	0.410*** [0.272 : 0.557]	-	0.410*** [0.272 : 0.557]

Notes: bootstrapping confidence intervals estimated with 5000 resamples.

\*\*\* $p < 0.001$

\*\*  $p < 0.01$

\*  $p < 0.05$