

Drivers and outcomes of sustainable export marketing strategies in international environments

Sustainable
export
marketing
strategies

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Abstract

Purpose – This study aims to investigate the relationship between market-oriented environmental sustainability (MES) and green export-related resources and capabilities, analyzes the impact of these resources and capabilities on the eco-friendly export marketing strategy and assess the influence of such strategy on export performance.

Design/methodology/approach – This study uses survey data from 241 manufacturing export firms analyzed through partial least squares structural equation modeling.

Findings – The results show a positive influence of MES on green export-related resources and capabilities. Further, while green export-related capabilities directly affect eco-friendly export marketing strategy, resources only influence it indirectly through capabilities. The results also show that the adoption of an eco-friendly export marketing strategy contributes to firm's export performance.

Originality/value – This study makes an important contribution to sustainability and exporting literature by evaluating the behavior of firms in terms of MES and eco-friendly export marketing strategy.

Keywords Sustainable behavior of the firm, Environmental marketing, Export performance, Strategic corporate sustainability, Green export-related resources, Green export-related capabilities

Paper type Research paper

1. Introduction

For decades, humans ignored the environmental consequences of their actions. Yet, their behaviors affected Earth's resources, sustainability and future. Years of environmentally

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damaging behaviors began to reflect in climate changes, global warming or loss of biodiversity (Bager and Lambin, 2020). Aware of these effects, eco-conscious entities called for actions to break the cycle.

Following this appeal, environmentally friendly practices proliferated among consumers and organizations, and sustainability emerged as a key topic. Particularly, firms are reinventing themselves and adopting more sustainable business and marketing practices (Chiarvesio *et al.*, 2015; Leonidou *et al.*, 2013b). Managers are considering environmental aspects in product development, manufacturing and even in firms' strategic postures (De Guimarães *et al.*, 2018; Katsikeas *et al.*, 2016). In this regard, market-oriented environmental sustainability (MES) is an important strategic orientation that shapes firm's strategic vision and sustainable practices and promotes performance (Bıçakcıoğlu *et al.*, 2020; Crittenden *et al.*, 2011; Li *et al.*, 2017). The concept of MES is defined as the organization-wide culture that promotes eco-friendly shared values, norms and behaviors underlying an organization's efforts (Li *et al.*, 2017). This enables the implementation of sustainable environmental practices and strategies, while meeting the needs of stakeholders, to obtain a competitive advantage in the marketplace (Crittenden *et al.*, 2011; Hult, 2011). For Hult (2011) the expanded concept of market orientation considers the possibility of an organization strategically aligning itself with the interests of multiple stakeholders, to capture a unique and competitive market position. Even though MES' importance is highlighted in the literature, evidence regarding its influence in green business strategies is still missing (Bıçakcıoğlu *et al.*, 2020).

Furthermore, while sustainability is acknowledged as important nowadays, it is especially crucial for SMEs and firms operating internationally, given the growth of environmental issues globally (Chiarvesio *et al.*, 2015). On the one hand, SMEs, although contributing to countries' value creation and jobs, are characterized by scarce resources, low bargaining power, limited information and less structured organizational hierarchies (Lubatkin *et al.*, 2006). Hence, it is more challenging for SMEs to get involved in environmental issues and implement their green marketing strategies (Leonidou *et al.*, 2017). Furthermore, the implementation of these strategies internationally adds more complexity, even though it represents a competitive advantage and a way to differentiate and manage costs (Varadarajan, 2014). Still, most studies on green business strategy examined larger firms (for exception see, for instance, Leonidou *et al.*, 2017) and domestic contexts, neglecting the international setting (Bıçakcıoğlu *et al.*, 2020). There is scant literature on the drivers and outcomes of sustainable marketing strategies in SMEs and international environments (Martin-Tapia *et al.*, 2010), namely, in export settings (for exceptions see Leonidou *et al.*, 2015; Leonidou *et al.*, 2013a).

Due to its importance in explaining the role of firm's internal sources on sustained competitive advantage (Kraaijenbrink *et al.*, 2010) this manuscript builds on the resource-based view (RBV) (Wernerfelt, 1984) and combines the international business and sustainability literatures. Specifically, this study analyzes the influence of MES on the development of SME's green export-related resources and capabilities. Additionally, we examine the relationship between such resources and capabilities on eco-friendly export marketing strategy and on export performance. The contribution of this study is fourfold:

- (1) It combines previously separated literatures, namely, marketing, sustainability, export and SMEs to provide an integrative model.
- (2) It explores the role of organizational factors in influencing the firm's export marketing strategy and performance, contributing to the RBV framework and to the marketing literature.
- (3) It extends sustainability literature by operationalizing an environmental sustainable orientation.

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- (4) It examines the organizational factors-marketing strategy-performance relationship in the relevant, yet understudied context of exporting SMEs.

Particularly, this study contributes to the literature on sustainability, exporting and SMEs in that there is a paucity of studies that evaluate the behavior of firms in terms of MES and eco-friendly export marketing strategy.

The paper proceeds as follows. After this first introductory section, a section on background research follows. Then, the conceptual model and research hypotheses are presented. The following two sections describe the research methods and present the empirical results. We conclude with a discussion of theoretical contributions and practical implications that are followed by suggestions for future research.

2. Background research

2.1 Green export marketing strategy

Green marketing is defined as organizations' efforts to produce, promote, pack and retrieve products in an eco-conscious manner (Boone and Kurtz, 2001). Green marketing has been defined in several ways in the literature, and several terms such as environmental marketing, ecological marketing or sustainable marketing has been interchangeably used to refer to it (Dangelico and Vocalelli, 2017; Leonidou *et al.*, 2013a, 2013b) refer to green marketing as the marketing practices, policies and procedures that explicitly incorporate an eco-friendly focus, to create revenue and deliver results that satisfy products' organizational and individual aims. In that regard, green marketing requires adaptation, namely, to the marketing mix, to incorporate eco-friendly products, prices, distribution and promotion and a green marketing strategy (Leonidou *et al.*, 2013a, 2013b). For instance, green product strategies involve product decisions and actions that aim to protect or benefit the natural environment, saving energy and/or resources and reducing pollution and waste (Leonidou *et al.*, 2013b).

The awareness of changes in climate, loss of biodiversity, as well as population and environmental problems lead organizations to identify sustainability needs and to consider such needs in their marketing strategies (Leonidou *et al.*, 2013a, 2013b). This is especially true for organizations that are more exposed to external social and environmental pressures (Galeazzo and Klassen, 2015), such as exporting firms. Greater exposure of exporting firms to environmental issues contributes to the development of a culture associated with environmental issues (Leonidou *et al.*, 2013a). This, coupled with the public concerns about the environment, contributes to the key role of eco-friendly export marketing strategies in the goal achievement in export markets (Leonidou *et al.*, 2013a). In fact, Chan (2010) found that firms operating internationally generally achieve better performance in their marketing strategies in foreign countries when they adopt a sustainable approach. This may be due to profitability improvement via cost reduction and market performance optimization (Fraj *et al.*, 2011); performance benefits of being environmentally and/or socially friendly (Leonidou *et al.*, 2013a, 2013b); or competitive advantage development (Leonidou *et al.*, 2015).

Additionally, exporting firms' sustainable concerns and actions involve multiple external factors (Taherdangkoo *et al.*, 2017), namely, micro-environment factors (such as competitive intensity and public concern, e.g. Leonidou *et al.*, 2015) and macro-environment factors (such as regulations, technology, cultural/social or economy, e.g. Zou *et al.*, 2003; Khan, 2020). While overall firms may experience influences in the adoption of eco-friendly marketing strategies, exporting firms face a more complex setting. Given the sociocultural, economic, regulatory, technological and environmental differences between the host and target country, exporting firms face bigger problems in adopting sustainable strategies and entering foreign markets (Hultman *et al.*, 2009).

Still, opting for green marketing mix elements can produce beneficial performance outcomes (Leonidou *et al.*, 2013a, 2013b). For instance, firms may opt for eco-friendly product and distribution strategies, which show to positively affect market and product performance (Katsikeas *et al.*, 2016; Leonidou *et al.*, 2015). Firms may evidence their eco-conscience by communicating products' environmental benefits, namely, through advertising environmental features and claims, publicizing environmental values and incorporating environmental requirements on product packaging (Banerjee, 2002; Leonidou *et al.*, 2013a, 2013b). To do this more effectively and efficiently, firms require specialized resources and capabilities. This is crucial for the design and implementation of sound marketing strategies and development of a sustainable competitive advantage (Hart, 1995; Fraj *et al.*, 2011).

2.2 Export performance of firms

Export performance is a widely studied concept and, even though there is no consensual definition (Aaby and Slater, 1989). We can refer to it as the results of a firm's export activities (Katsikeas *et al.*, 2000). Mostly studied as effectiveness, efficiency or adaptiveness, it can be measured through economic measures (such as profit or sales), product related measures (e.g. number of new export products), market related measures (such as new markets) or more generic measures (namely satisfaction) (Diamantopoulos and Kakkos, 2007; Katsikeas *et al.*, 2000).

According to the literature, several factors influence export performance, namely, managerial characteristics, organizational factors, environmental forces, as well as export marketing strategy (Leonidou *et al.*, 2002). Particularly, there appears to be an instrumental role of some organizational resources (e.g. financial resources) and capabilities (e.g. new product development capabilities) in achieving superior performance in foreign markets (Morgan *et al.*, 2004). Further, in what concerns sustainability issues, export firms are positively associated with such issues, as for instance eco-innovation (Galbreath *et al.*, 2021). Due to the additional challenges of the export setting, export managers adjust their sustainable export marketing strategy to economic, regulatory, socio-cultural and technological environment forces to improve their performance (Leonidou *et al.*, 2013a). As a result, export firms with strategies complying with sustainable issues tend to have superior export performance (Leonidou *et al.*, 2013a; Leonidou *et al.*, 2015). Still, recent studies alert to the importance of disclosing environmental information (Lu *et al.*, 2020).

3. Conceptual model and hypotheses

The resource-based view (RBV) of the firm underlines the key role of organizational resources and capabilities in the formulation and implementation of strategies that allows firms attaining competitive advantage and superior performance (Barney, 1991). Grounded on RBV, this study analyses the influence of MES on export-related resources (i.e. physical, experiential, financial) and export-related capabilities (i.e. shared vision, technology sensing/response, cross functional coordination), as well as the influence of these resources and capabilities on an eco-friendly export marketing strategy (i.e. product, price, promotion and distribution). Additionally, the model examines the effect of this strategy on export performance. Figure 1 presents the conceptual model proposed.

3.1 Market-oriented environmental sustainability, green export-related resources and capabilities and eco-friendly export strategy

A firm's strategic orientation represents its philosophy of how to do business and align with the environment (Murray *et al.*, 2011), acting as a source of differentiation (Knight *et al.*, 2020). It reflects the decision-making style, favored practices and methods that direct firm's operations.

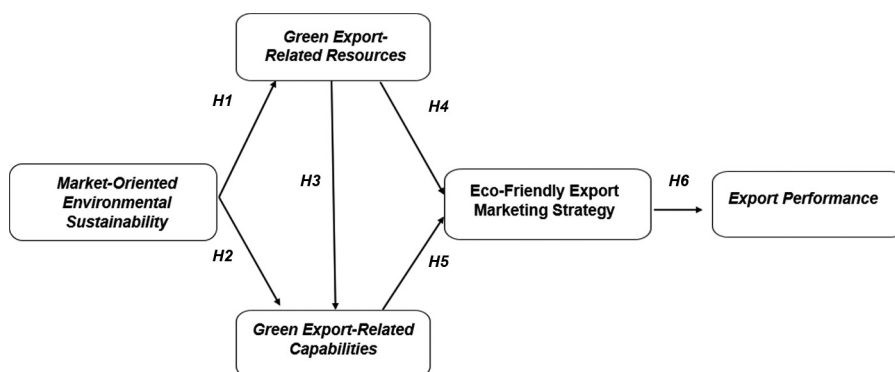


Figure 1.
Conceptual model
and hypotheses

MES is a market-centric cultural and behavioral perspective that reflects firms' orientation for market-based environmentally sustainable practices (Hult, 2011). For Crittenden *et al.* (2011), market-focused sustainability can shape an organization's strategic vision and sustainable practices. A strong MES can encourage corporate learning and developing of innovative sustainable solutions (Menguc *et al.*, 2010).

Following the emergence of eco-consciousness and sustainable consumption issues over the years, consumers became more aware and interested in environmental products or services (Leonidou *et al.*, 2013a, 2013b). Market-oriented firms are aligned with the market and concerned with understanding customers' current and latent needs to generate value (Dibrell *et al.*, 2011; Murray *et al.*, 2011). As such, they are more willing to consider environmental sustainability in their operations and to develop environmentally friendly offerings that are valued by customers (Chan, 2010; Chan *et al.*, 2012; Crittenden *et al.*, 2011). In this regard, firms may encourage pro-environmental activities, use eco-friendly resources, avoid consuming scarce resources and dedicate to sustainable and environmental practices (Crittenden *et al.*, 2011). As a result, firms will privilege environmental-friendly resources and capabilities (Hart, 1995; Leonidou *et al.*, 2015). As such, we hypothesize as follows:

H1. MES positively relates to green export-related resources.

H2. MES positively relates to green export-related capabilities.

According to the RBV, firms are idiosyncratic bundles of resources and capabilities (Barney, 1991). Resources are tangible, intangible or personnel-based assets (e.g. physical, financial, technical expertise, employee commitment) (Leonidou *et al.*, 2013a), whereas capabilities reflect embedded combinations of skills and processes (Barney, 2001). Barney suggested that to obtain competitive advantage, and to allow firms achieve superior performance, firms should opt for rare, valuable, inimitable and non-substitutable resources (Barney, 2001). Nevertheless, to capture resources' potential, firms need to deploy them into capabilities. These information-based, tangible or intangible processes and routines are what enables firms to develop, combine and transform resources into value offerings and improve their performance (Karim and Mitchell, 2000; Morgan *et al.*, 2004; Teece *et al.*, 1997) and differentiation (Khan, 2022).

The nature, amount and quality of a firm' resources are vital for nurturing its capabilities (Morgan *et al.*, 2004; Leonidou *et al.*, 2017). Eco-conscious firms will follow the sustainability principle, including opting for green resources, use of eco-friendly materials or renewable options, for instance. In this regard, the deployment of such resources will likely follow the environmentally friendly approach (Godfrey *et al.*, 2009; Leonidou *et al.*, 2017). As firms

continue to build and reconfigure internal and external resources in response to changing environmental issues, they reinforce a favorable approach for sustainable solutions and thus positively influence the firm's capabilities (Leonidou *et al.*, 2015). In view of the above the following hypothesis is formulated:

H3. Green export-related resources positively influence green export-related capabilities

The existence of pronounced heterogeneity in the international business environment (e.g. socio-cultural, economic, political-legal) highlights the crucial role of proper acquisition and management of resources and capabilities in export performance (Zou *et al.*, 2003). Noteworthy progress has been made in identifying the capabilities and resources that affect firm's ability to simultaneously seek success, both financially and in the environmental sphere (Berchicci and King, 2007). Environmentally friendly export resources assist firms' green export marketing strategies (Leonidou *et al.*, 2013a). Still, while resources, namely, physical, financial and experiential resources, are valuable to green practices and export strategy, they need to be deployed into capabilities to fully capture that value (Barney, 1991). Following the RBV line of reasoning, resources possession may be a necessary yet not sufficient condition for value delivery. It is not only the resources the firm possesses, but how it applies them and the capabilities it generates that will contribute to its strategy (Ray *et al.*, 2004).

Regarding capabilities, these are essential for exporting firms to compete both in the domestic and in the international market (Leiblein and Reuer, 2004). As with resources, having the right capabilities helps firms to implement successful marketing strategies (Morgan *et al.*, 2004; Leonidou *et al.*, 2011). For example, market responsiveness was found to be essential to improve export performance in emerging market export firms (Khan and Khan, 2021). Among the capabilities evidenced as relevant to assist the implementation of green export marketing strategies are shared vision, cross-functional coordination and responsiveness to technological change (Leonidou *et al.*, 2013a). Environmental sustainability and the establishment of stringent environmental support policies are key factors and can be mobilizing forces to stimulate the integration of environmental issues in product development (Leonidou *et al.*, 2015). Further, the environmental-related knowledge that export firms acquire in international markets may help them to develop their environmental strategies (Aguilera-Caracuel *et al.*, 2012; Leonidou *et al.*, 2013a).

In view of the above, the following hypotheses are proposed:

H4a. Green export-related resources positively influence eco-friendly export marketing strategy.

H4b. Green export-related capabilities mediate the relationship between green export-related resources and eco-friendly export marketing strategy.

H5. Green export-related capabilities positively influence eco-friendly export marketing strategy.

3.2 Eco-friendly export marketing strategy and export performance

Researchers have shown a growing interest in examining how environmental sustainability issues can be incorporated into marketing (Chabowski *et al.*, 2011; Dangelico and Vocalelli, 2017). To meet the environmental concerns of different stakeholders, firms may modify existing products and processes or introduce new products and production processes to reduce ecological impact and improve environmental performance (Cronin *et al.*, 2011).

Marketing strategy at the sustainability level promotes innovation and creates opportunities and competitive advantages (Lensen and Van Wassenhove, 2012). The eco-friendly choices and practices may represent reduced costs due to better use of materials or lower waste and efficiencies, as well as increased margins or market share due to sustainability positioning (Varadarajan, 2014). As such, the integration of green issues into corporate decision-making and export marketing strategy contributes to firms' competitive advantage and performance (Fraj *et al.*, 2011; Leonidou *et al.*, 2013a; Leonidou *et al.*, 2017). In fact, past studies show that superior export performance is linked to the sustainability strategies adopted (Leonidou *et al.*, 2013a; Martin-Tapia *et al.*, 2008, 2010). Particularly, eco-friendly export marketing strategy has shown to be instrumental to export performance (Leonidou *et al.*, 2013a). Thus, the following hypothesis is proposed:

H6. The firm eco-friendly export marketing strategy positively influences export performance.

4. Method

4.1 Data collection

This study focused on manufacturing exporting small- and medium-sized firms (SMEs) based in Portugal. SMEs, at increasingly early stages of their development look and seek more actively to build strategies that involve the international setting (McDougall and Oviatt, 2000). Further, SMEs seem to grow faster internationally than their domestic competitors (Andersson *et al.*, 2004). The sampling frame was provided by Informa D&B and consisted of 3,387 manufacturing exporting SMEs.

The data was collected through a self-administrated online survey sent by email to all firms listed in the Informa D&B database. This e-mail included the survey link and a letter presenting the study and assuring data's, participants' and firms' confidentiality. The responsible for export operations was identified as the key informant in this study. Data collection occurred in three waves (the baseline survey plus two follow-ups). This resulted in 827 responses, representing a response rate of 24.4%. From these, we obtained 241 fully completed questionnaires.

The development of the questionnaire followed a three-step approach. In the first step, we based in the literature to operationalize each construct. Next, the questionnaire was evaluated by academics who were expert in sustainability and international marketing. Later, we did a pilot test with five SME export managers to verify the functionality of the questionnaire for the survey target. Only minor changes were suggested. The questionnaire was translated from English to Portuguese and then translated back in English to ensure accuracy.

Considering the questions included in the questionnaire, and according to previous studies conducted in this area, the key informant is identified as the person responsible for the export activity (Leonidou *et al.*, 2013a). As a validity and quality check, we asked respondents' level of seniority in his or her firm and respective position. Respondents had on average 14.6 years of experience in the firm had been in the same position for 11.85 years. Most of the respondents were exporting director (48.4%) or managing director (29.8%). Table 1 present the job title of the respondents. Regarding the firm-level characteristics, 44.81% of the firms reported that they had between 10 and 49 full-time employees, and the remaining had between 50 and 250 full-time employees. On average, firms have been involved in export activity for 22.61 years and export to 11.08 markets. Regarding the percentage of the firm's total turnover that was due to exports, 17.01% of the firms indicate that it was lower than 20%; 27.39% state it to be between 20% and 49.9%; 19.09% indicate it as 50%–79.9%; and the remaining 36.51% of the firms indicate it to be above 80% of their total turnover.

4.2 Non-response bias and common method bias

To assess for non-response bias, we compare early and late respondents (Armstrong and Overton, 1977) to all items used to measure the variables included in this study as well as for and demographic characteristics. No significant differences were found in any of the comparisons.

To safeguard against common method bias, we followed some of the ex-ante approaches suggested by Podsakoff *et al.* (2003), namely, we assured respondents' anonymity, to encourage truthfulness regarding the answers and allow them to be as honest as possible; questions and items were written in a simple, clear and concise way; and respondents were not aware of the conceptual model, preventing them to answer according to the beliefs of how the variables should link. In addition, we apply Harman's single-factor test (Malhotra *et al.*, 2006; Podsakoff *et al.*, 2003). The results from the Harman's single-factor test showed that no single factor emerged from a factor analysis of all survey items. The non-rotated solution of EFA analysis produced 11 factors with eigenvalues greater than 1.0 that accounted for 77.9% of the total variance, with the first factor explaining 38% of the variance. These results suggest that the common method bias was not a critical issue in our study.

Finally, we ran the marker variable test (Lindell and Whitney, 2001; Malhotra *et al.*, 2006), which uses a theoretically unrelated construct (termed a *marker* variable). Following previous research (Silva *et al.*, 2019), we conducted the test using tenure of respondents as a marker variable. The average correlation between the study's principal constructs and the marker variable was very low ($r = 0.0046$). Following the recommendations of Malhotra *et al.* (2006), to compute the common-method bias-adjusted correlations matrix, we use the second smallest correlation of the market variable with the study's principal constructs ($r_M = 0.0195$) and apply the equation $r_A = (r_O - r_M) / (1 - r_M)$, where r_A was the adjusted correlation, r_O was the original correlation value, and r_M was the correlation of the marker variable. The difference between the original and the adjusted correlation matrix was not relevant with an average of $\Delta r = 0.0092$ (Lindell and Whitney, 2001; Malhotra *et al.*, 2006), providing no evidence of common method bias.

4.3 Measurement

All scales used to measure each of the latent variables were adapted from the literature and are provided in supplementary material. Respondents were asked to focus on a specific product market venture when answering questions contained in the questionnaire (c.f. Leonidou *et al.*, 2013a).

MES was measured with 10 items adopted from Li *et al.* (2017). Consistent with previous studies, we operationalized green export-related resources and green export-related capabilities as higher order factors (Morgan *et al.*, 2004). Green export-related resources (GER) construct is a higher-order construct, comprising green export-related physical resources (PHR-3 items), financial resources (FIR-4 items) and experiential resources (EXR-3 items). The items used to

Table 1.
Job title of the respondent

Designation	%
Exporting Director	48.4
Managing Director	29.8
Marketing Manager	11.5
Sales Manager	2.0
Plant Manager	8.3

measure these constructs were adapted from [Leonidou et al. \(2013a\)](#) and [Morgan et al. \(2004\)](#). In the same vein, green export-related capabilities (GEC) were operationalized as a second-order factor that consisted of three first-order factors, green export-related shared vision (SHV-4 items), cross-functional coordination (CFC-3 items) and technology sensing/response (TES-3 items). The items used to measure these constructs were adapted from [Leonidou et al. \(2013a\)](#). Eco-friendly export marketing strategy was operationalized as a second-order factor comprising four first-order factors, namely, product (EFP-5 items), price (EFR-5 items), distribution (EFD-6 items) and promotion programs (EFM-5 items). The items were adapted from [Leonidou et al. \(2013a\)](#). Export performance (EPF) was measured through 5 items adapted from [Leonidou et al. \(2011\)](#) and [Leonidou et al. \(2013a\)](#). All variables were measured with seven-point Likert type scales (1 = “Strongly disagree” to 7 = “Strongly agree”).

5. Data analysis and discussion of findings

To test our conceptual model, we use partial least squares structural equation modeling (PLS-SEM) in SmartPLS 3 software ([Ringle et al., 2015](#)). PLS, a variance-based SEM technique, is appropriate to estimate complex models that involve higher order factors ([Henseler et al., 2009](#)). In this section, we first present the results of the measurement model assessment and then we discuss the results of the structural model regarding the proposed hypotheses.

5.1 Measurement model

The measurement model is analyzed in terms of individual indicators reliability, construct reliability, convergent validity and discriminant validity. The reliability of individual indicators is assessed through the standardized indicator loadings and their t statistic. To assess the reliability of individual indicators, we analysed the standardized indicator loadings and their t statistic ([Appendix](#)). The values presented in [Appendix](#) showed that the loadings are higher than the threshold of 0.70 and $p < 0.001$ for all first- and second-order constructs ([Hair et al., 2017](#)), which supports individual indicator reliability. To assess internal consistency reliability and convergent validity, we examined composite reliability (CR), Cronbach's alpha (α) and average variance extracted (AVE) for all constructs. α , AVE and CR values are presented in [Table 2](#). All α and CR values exceeded the threshold of 0.7 ([Fornell and Larcker, 1981](#)), which indicate adequate construct reliability. The AVE values for all constructs surpassed the cutoff of 0.5 ([Bagozzi and Yi, 1988](#)). Moreover, AVE values for each construct are larger than the corresponding CR values. Thus, constructs also exhibited adequate convergent validity.

To assess discriminant validity, we follow two criteria: the Fornell–Larcker test ([Fornell and Larcker, 1981](#)) and the heterotrait–monotrait ratio (HTMT) ([Hair et al., 2017](#)). The Fornell–Larcker criterion require that the square root of the AVE of each construct to be higher than the construct's highest correlation with any other construct ([Fornell and Larcker, 1981](#)). The results presented in [Table 2](#) show that this criterion was accomplished for all constructs. The HTMT criterion require that all HTMT ratios are lower than 0.9 ([Hair et al., 2017](#)). All HTMT ratios are below the threshold value of 0.9. Taken together, these results provided evidence of discriminant validity.

5.2 Structural model

The evaluation of the model's predictive accuracy and relevance ([Hair et al., 2017](#)), and the structural relationships were undertaken via Stone–Geisser's Q^2 test, coefficient of determination (R^2) and the sign magnitude, and significance of the path coefficients. However, prior to evaluating the structural model, we assessed model' collinearity ([Hair et al., 2017](#)). The VIF values

Table 2.
Composite reliability,
average variance
extracted and
correlation

Latent variables	α	CR	AVE	1	2	3	4	5	6	7	8	9	10	11	12
(1) PHR	0.881	0.927	0.808	<i>0.899</i>	0.641	0.733	0.741	0.665	0.673	0.728	0.375	0.402	0.555	0.655	0.511
(2) FIR	0.958	0.970	0.889	0.593	<i>0.943</i>	0.584	0.552	0.608	0.640	0.494	0.25	0.261	0.432	0.578	0.445
(3) EXR	0.918	0.948	0.86	0.661	0.551	<i>0.927</i>	0.789	0.722	0.736	0.662	0.285	0.340	0.562	0.642	0.476
(4) SHV	0.929	0.949	0.824	0.669	0.521	0.730	<i>0.908</i>	0.829	0.701	0.722	0.326	0.419	0.546	0.688	0.450
(5) CFC	0.906	0.941	0.842	0.596	0.570	0.661	0.762	<i>0.918</i>	0.786	0.731	0.439	0.494	0.604	0.753	0.436
(6) TFS	0.920	0.949	0.862	0.607	0.602	0.680	0.650	0.719	0.928	0.749	0.489	0.496	0.661	0.750	0.403
(7) EFP	0.882	0.914	0.679	0.636	0.449	0.590	0.648	0.649	0.670	<i>0.824</i>	0.724	0.733	0.817	0.791	0.458
(8) EFR	0.919	0.940	0.758	0.336	0.235	0.261	0.302	0.400	0.449	0.658	<i>0.870</i>	0.818	0.690	0.527	0.290
(9) EFD	0.959	0.967	0.83	0.372	0.252	0.323	0.400	0.464	0.469	0.684	0.826	<i>0.911</i>	0.708	0.543	0.286
(10) EFM	0.957	0.967	0.853	0.511	0.415	0.527	0.515	0.562	0.620	0.752	0.647	0.681	<i>0.923</i>	0.652	0.388
(11) MES	0.975	0.978	0.815	0.611	0.562	0.611	0.658	0.710	0.714	0.729	0.495	0.524	0.630	<i>0.903</i>	0.434
(12) EPF	0.953	0.964	0.843	0.468	0.426	0.446	0.422	0.406	0.378	0.418	0.270	0.276	0.370	0.419	<i>0.918</i>
Mean	—	—	—	5.230	4.873	5.190	5.048	4.546	4.533	4.728	3.826	3.826	4.303	4.705	4.633
SD	—	—	—	1.150	1.504	1.223	1.184	1.301	1.377	1.258	1.406	1.512	1.490	1.052	1.523

Notes: Italic numbers are the square roots of AVE. Below the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios. SD-Standard deviation

were below the indicative value of 5 (Hair *et al.*, 2017), ranging from 1.92 to 2.90. These results suggest no collinearity problems.

We evaluated the Stone–Geisser test criterion (Q^2) using a blindfolding approach with an omission distance of 7. The Q^2 values obtained for the four endogenous variables were well above zero (EPF: 0.115; green export-related resources: 0.295; green export-related capabilities: 0.495; eco-friendly export marketing strategy: 0.237), supporting the predictive relevance of the model. The coefficient of the determination R^2 for the four endogenous variables (export performance: 13.9%; green export-related resources: 47.9%; green export-related capabilities: 73.9%; eco-friendly export marketing strategy: 40.3%) surpass the threshold value of 10% suggested by Falk and Miller (1992), suggesting a satisfactory predictive accuracy.

The significance of the parameter estimates for the proposed structural relationships were assessed using 5,000 bootstrap resamples and the confidence intervals at 95% (Hair *et al.*, 2017). Table 3 displays the standardized path coefficients, *t*-values and *p*-values for the proposed path relationships. Of the six proposed hypotheses, five were supported.

H1 and *H2*, which posit that MES positively influences green export-related resources and capabilities were supported with ($\beta = 0.692$; $p < 0.001$) and with ($\beta = 0.402$; $p < 0.001$), respectively. These results are in accordance with Li *et al.* (2017), who found that a market-oriented culture of sustainability helps firms to develop capabilities.

H3, which postulates a positive relationship between green export-related resources and green export-related capabilities, was supported with ($\beta = 0.531$; $p < 0.001$). These results are in line with the conclusions of Karim and Mitchell (2000), who state that capabilities are influenced by resources, derive from them, and are, in themselves influence the routines on which the firm is based. Leonidou *et al.* (2017) also recognize the vital role of resources for nurturing its capabilities. Several studies developed in the context of exporting show a positive link between export-related resources and export-related capabilities (Morgan *et al.*, 2004). A study conducted among Cypriot SMEs also support the positive relationship between organizational resources and capabilities (Leonidou *et al.*, 2017).

Regarding hypothesis *H4a*, green export-related resources do not have a significant direct effect on eco-friendly export marketing strategy ($\beta = 0.033$; ns), however, an indirect effect exists, via green export-related capabilities as considered in *H4b* (positive indirect effect with $\beta = 0.323$; $p < 0.001$). Therefore, we can conclude that, while resources are

Hypothesis	Hypothesized path	Standard path coefficient	<i>t</i> -value	<i>p</i> -value
<i>H1</i>	Market-Oriented Environmental Sustainability → Green Export-Related Resources	0.692	15.992	0.000
<i>H2</i>	Market-Oriented Environmental Sustainability → Green Export-Related Capabilities	0.402	4.754	0.000
<i>H3</i>	Green Export-Related Resources → Green Export-Related Capabilities	0.531	6.578	0.000
<i>H4a</i>	Green Export-Related Resources → Eco-Friendly Export Marketing Strategy	0.033	0.412	0.681
<i>H5</i>	Green Export-Related Capabilities → Eco-Friendly Export Marketing Strategy	0.608	6.604	0.000
<i>H6</i>	Eco-Friendly Export Marketing Strategy → Export Performance	0.373	6.881	0.000

Table 3.
Structural model
assessment

valuable for developing an eco-friendly export marketing strategy, they may not be sufficient to do so. To fully capture their value, they need to be leveraged into capabilities (Barney, 1991).

As per *H5*, our results show a strong positive relationship between green export-related capabilities and eco-friendly export marketing strategy ($\beta = 0.608$; $p < 0.001$). This finding is in line with previous studies developed in the context of SMEs (Aragón-Correa *et al.*, 2008) and on green exporting (Leonidou *et al.*, 2013a).

Finally, as predicted by *H6*, eco-friendly export marketing strategy positively influences export performance ($\beta = 0.373$; $p < 0.001$). These results comply with previous research developed either in domestic or export market contexts (Fraj *et al.*, 2011; Leonidou *et al.*, 2013a). Specifically, Leonidou *et al.* (2013b) found a positive relationship between green product and distribution programs and firms' product market performance. In the export market context, adopting an eco-friendly export marketing strategy enhances the firm's export performance (Leonidou *et al.*, 2015).

6. Implications and conclusions

Environmental concerns and sustainability issues increasingly become part of people's and firm's lives. The evident negative consequences of human actions on the environment lead customers, as well as firms to endorse environmental conscious behaviors (Chiarvesio *et al.*, 2015). In what concerns firms, this means to change practices and integrate environmental aspects in their way of thinking and doing business (Varadarajan, 2014). Whereas this is important overall, it has proven to be especially relevant for firms operating in export settings (Leonidou *et al.*, 2013a). However, only a few studies have dedicated time to analyze the green aspects of exporting (Leonidou *et al.*, 2013a; Martin-Tapia *et al.*, 2010). The present study aims to understand the impact of MES on green export-related resources and capabilities, and their influence on eco-friendly export marketing strategy. The model also examines eco-friendly export marketing strategy's impact on export performance.

Our findings reveal that MES positively influences both green export-related resources and capabilities. Hence, firms that incorporate sustainability into their market orientation and have a culture that favors sustainable principles, standards and conducts tend to opt for green resources and capabilities. Further, green export-related capabilities contribute to eco-friendly export marketing strategy, green export-related resources. Green export-related resources, on their hand influence eco-friendly export marketing strategy indirectly. It is through the deployment of resources into capabilities, rather than through the resources *per se* that such strategy is implemented. Finally, eco-friendly export marketing strategy positively influences firm's export performance, which corroborates the results of previous studies in this area (Leonidou *et al.*, 2013a).

Based on these findings, this study brings several contributions. First, the study combines marketing, sustainability, export and SMEs literature and proposes an integrative model that studies organizational factors-marketing strategy-performance. Second, it analyses MES and green export-related resources and capabilities role in influencing the firm's export marketing strategy and export performance. In this regard, we found that market-oriented firms that consider sustainability issues tend to favor green resources and capabilities. Further, whereas the development of capabilities provides for export marketing strategy, the possession of resources *per se* does little for this. It is resources' deployment into capabilities that allows to capture resources value in this regard, rather than its possession *per se*, as observed in the mediating hypothesis. This result is an empirical test to RBV reasoning of the need to deploy resources into capabilities. Third, the research extends sustainability literature with the operationalization of an environmentally sustainable orientation. Fourth, we add to existing

knowledge on SME's by combining RBV and sustainability to analyze the impact on export marketing strategies. Existing studies are focused on each theme in separate. For example, [Ozkan *et al.* \(2022\)](#) studied multinational firms in international context, while [Taherdangkoo *et al.* \(2017\)](#) and [Bıçakcıoğlu *et al.* \(2020\)](#) explored the influence of sustainable strategies on export performance but not on export marketing strategies. Furthermore, few studies explore this phenomenon using RBV as overarching theory. For example, [Fraj *et al.* \(2011\)](#) studies the impact of export marketing strategies on export performance, but they do not explore the factors influencing export marketing strategies. As such, our study advances existing knowledge through the identification of the organizational antecedents of export marketing strategies, thus contributing to the RBV framework by detailing the role of resources and capabilities in the transformation of the firm's MES into export marketing strategies.

This study also extends sustainability literature by testing empirically the link between sustainable-related strategic orientation and the firm's resources and capabilities. The results of this study provide evidence that firms that favor environmental systems and practices and acquire and develop green export-related resources and capabilities are better able to eco-friendly export marketing strategies. In addition, it confirmed that that eco-friendly export marketing strategies will reflect positively on firms' export performance.

Managerially, this study also presents important implications. Specifically, it leads to important decision-making pathways in exporting SMEs. First, it suggests firms that if they favor eco-friendly shared values, norms and behaviors, this will influence the type of resources they acquire and the type of capabilities they will end up developing. Second, the study's findings show that firms need to assure that rather than merely investing in (green) resources, firms need to employ their efforts in deploying such resources into capabilities. This implication is especially valuable to SMEs. Although firms do not work with unlimited resources, SMEs are further conditioned in this regard. As a result, it is crucial to understand the priorities in terms of resources and efforts to engage. Firms should invest in the capabilities to develop eco-friendly marketing. Thus, the development of the business model should consider the dimensions of organizational infrastructure and partnerships to strengthen green exporting capabilities. Further, the study's findings suggest that the adoption of green practices pays off in terms of export performance. Thus, SMEs should not only enhance their focus on environmental sustainability, but also communicate it in international markets.

Finally, it is essential that there is strategic coherence in environmental sustainability decisions, and that there is a shared vision throughout the organization and partners for effective market orientation. This requires a clear and explicit environmental strategy that operates as an external and internal communication mechanism.

The implications can also be considered from the policy-making perspective. The adoption of an ecofriendly approach may represent investments, alterations of materials and procedures or reorganization of activities. Firms may resist to promote such changes, especially if they are not aware of the resulting benefits. Public policymakers have a key role in raising firms' awareness for environmental issues and potential benefits. In that regard, they can promote initiatives such as environmental seminars or dissemination of successful eco-friendly case studies. Furthermore, policymakers can provide environmentally friendly incentives, such as tax incentives to firms' investments that mitigate environmental impact. There are some limitations to our study. One the one hand, data originates from manufacturing exporting SMEs from a single country, which limits generalizability. The use of a single respondent per organization and the perceptual nature of data are also limitations. Future research can extend this study and analyze firms from multiple countries, accounting for variation in environmental regulations, national culture, exporting

markets, among others. One interesting research path is to compare exporting firms and non-exporting firms, to empirically test the enhanced relevance of sustainability to exporting firms. Another path for future studies is to compare samples from emerging economies vs advanced economies firms, as recommended by Ozkan *et al.* (2022). Future research could also include multiple respondents to minimize the impact of common method bias and add objective metrics of export performance to validate our findings.

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Appendix. Measurement scales

Sustainable
export
marketing
strategies

Constructs and items	Loadings	<i>t</i> -value
<i>[PHR] Green export-related physical resources</i>		
PHR1	We use modern, friendly-to-the-environment equipment and technology for the production of ecological products for export markets	0.899 49.638
PHR2	We have access to eco-friendly sources for the production of goods that are destined for export markets	0.881 43.140
PHR3	We have adequate production capacity for the manufacturing of eco-friendly products for export markets	0.916 75.859
<i>[FIR] Green export-related financial resources</i>		
FIR1	We have adequate resources for financing the environmental activities of our company in export markets	0.906 56.339
FIR2	We are in a position to quickly acquire financial resources for financing environmental activities in export markets	0.952
102.607		
FIR3	We have easy access to capital to finance our green activities in export markets	0.958
140.357		
FIR4	We are in a position to acquire additional finance for environmental actions in export markets when this is necessary	0.955
123.317		
<i>[EXR] Green export-related experiential resources</i>		
EXR1	We have adequate knowledge of the ecological trends and characteristics of the foreign markets where we are involved	0.893 45.928
EXR2	We have extended expertise concerning the exports of eco-friendly products in our industry	0.952
114.741		
EXR3	Our experience with exports of ecological products so far has been satisfactory	0.935 94.009

Table A1.
Green export-related
resources

Source: Adapted from Leonidou *et al.* (2013a) and Morgan *et al.* (2004)

RIBS

Constructs and items	Loadings	<i>t</i> -value
<i>[SHV] Green export related shared vision</i>		
SHV1 All our employees engaged in exporting make significant efforts toward achieving our environmental objectives	0.915	61.419
SHV2 Our managers and employees engaged in exporting always agree with the right environmental procedures of our firm	0.874	40.858
SHV3 Employees offer valuable ideas for improving our firm's ability to achieve its green objectives in foreign markets	0.926	82.03
SHV4 All our employees have a very clear idea about the firm's environmental objectives in foreign markets	0.915	86.743
<i>[CFC] Green export related cross-functional coordination</i>		
CFC1 We have informal systems for better coordinating eco-friendly issues relating to exports among departments in our firm	0.884	31.183
CFC2 We have formal systems for better coordinating environmental issues relating to exports among departments in our firm	0.941	85.85
CFC3 We work around projects with multidisciplinary teams regarding environmental issues relating to exports	0.926	69.945
<i>[TES] Green export-related technology sensing/response</i>		
TES1 We are often one of the first in our industry to detect technological developments that may affect our green efforts in foreign markets	0.916	50.854
TES2 We actively seek intelligence on technological changes in the environment that are likely to affect our green efforts in foreign markets	0.940	89.716
TES3 We generally respond very quickly to technological changes in the environment that have to do with green issues in foreign markets	0.928	78.441
TES4 Our firm lags behind the industry in responding to new technologies that have to do with green issues in foreign markets. (R)	*	*

Table A2.
Green export-related capabilities

Source: Adapted from [Leonidou et al. \(2013a\)](#)

Sustainable
export
marketing
strategies

Constructs and items	Loadings	t-value
<i>[EFP] Eco-friendly export product</i>		
EFP1	We are careful in selecting raw materials for our exported products that are environmentally friendly	0.827 29.114
EFP2	We are geared toward designing and developing eco-friendly goods for the foreign markets	0.843 32.548
EFP3	We have a tendency to increase the recycling rate of our export products over time	0.790 24.971
EFP4	We are adapting the brand name of our exported products in order to emphasize environmental benefits	0.838 37.530
EFP5	We tend to delete items from our product line destined for foreign markets, if these are not friendly to the environment	0.821 27.263
<i>[EFR] Eco-friendly export price</i>		
EFR1	We encourage customers in foreign markets to recycle our products after use by offering attractive prices as incentives	0.861 22.576
EFR2	In foreign markets, we tend to adopt price tactics (e.g., discounts) to encourage eco-friendly actions by end-users	0.909 49.780
EFR3	We take advantage of the success of some of our products in foreign markets to subsidize the cost of being eco-friendly	0.901 50.050
EFR4	We transfer our environmental costs to foreign buyers, because the higher prices will make them use the product more effectively and efficiently	0.893 42.893
EFR5	In foreign markets, we tend to transfer the costs of conforming to the environment to the final price of the product	0.782 20.222
<i>[EFD] Eco-friendly export distribution</i>		
EFD1	We collaborate with distribution channels in foreign markets to make arrangements for post-product use	0.882 44.216
EFD2	We collaborate with foreign distribution channels to build a joint commitment to protect the ' environment	0.919 53.504
EFD3	In foreign markets, we collaborate with distributors to develop products that ate friendly to the environment	0.906 45.882
EFD4	We encourage our distributors in the foreign markets to be environmentally responsible in their activities	0.898 34.689
EFD5	In foreign markets, we set cleat instructions for environmental responsibility and control the response of the distributors	0.932 60.455
EFD6	In foreign markets, we use environmental program standards for our distribution channels	0.927 58.555
<i>[EFM] Eco-friendly export promotion</i>		
EFM1	We communicate the eco-friendliness of our products in foreign markets by properly positioning their ecological features	0.932 55.53
EFM2	We help our foreign buyers to trace our eco-friendly products by labeling them to indicate that they are "green and ecological"	0.929 67.188
EFM3	Our advertisements in foreign markets emphasize the ecological characteristics of our products	0.955 91.493
EFM4	In our foreign advertisements, we stress our commitment toward protecting the environment	0.915 39.409
EFM5	Our communication efforts in foreign markets inform and stress out environmental activities to end-users	0.885 34.134

Table A3.
Eco-friendly export
marketing strategy

Source: Adapted from Leonidou *et al.* (2013a)

RIBS

Constructs and items		Loadings	<i>t</i> -value
EPF1	Export profits	0.902	46.742
EPF2	Export sales	0.953	128.581
EPF3	Export market share	0.895	46.564
EPF4	Export sales intensity	0.942	85.189
EPF5	Return on investment engaged in export operations	0.899	48.507
EPF6	Return on capital employed on export operations	*	*

Table A4.
[EPF] Export
performance

Source: Adapted from [Leonidou et al. \(2013a\)](#) and [Leonidou et al. \(2011\)](#)

Constructs and items		Loadings	<i>t</i> -value
MOES1	Our firm has clear and specific environmental policies	0.915	75.016
MOES2	Our firm includes environmental management investments in financial planning	0.924	79.823
MOES3	Our firm has been integrating in the marketing events the environmental management plan, its environmental vision and mission	0.893	39.202
MOES4	Our top managers are involved in formulating environmental policies	0.928	97.089
MOES5	Our middle managers are involved in implementing environmental policies	0.925	72.374
MOES6	We have formal plans for environmental management	0.936	95.256
MOES7	We have employee training programs on environmental management	0.910	63.293
MOES8	We have an internal reporting system for environmental issues	0.886	47.494
MOES9	We audit our environmental performances and report them in our external communications	0.832	29.818
MOES10	We use cross-functional teams to identify environmental problems, develop solutions, implement strategies and evaluate these strategies	0.875	44.536

Table A5.
[MOES] Market-
oriented
environmental
sustainability

Notes: *Items dropped during purification phase; (R) denotes a reverse scale
Source: Adapted from [Li et al. \(2017\)](#)

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