A meta-analysis on entrepreneurial orientation in the export context

Article (Accepted Version)


This version is available from Sussex Research Online: http://sro.sussex.ac.uk/id/eprint/108807/

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher’s version. Please see the URL above for details on accessing the published version.

Copyright and reuse:
Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.
A META-ANALYSIS ON ENTREPRENEURIAL ORIENTATION IN THE EXPORT CONTEXT

Purpose: Building on the lack of adequate attention devoted to encapsulating the research on entrepreneurial orientation (EO) in the export context, the main objective of this study is to quantitatively aggregate the empirical evidence as to the effect of export EO on its consequences. In addition, this meta-analytic review aims at exploring the act of possible contextual and measurement moderators in the proposed conceptual framework.

Methodology: Drawing on a meta-analytic approach, prior empirical results were synthesized by 71 effects gathered from 5,815 firms.

Findings: The meta-analytic findings spotlight that export EO exerts the biggest influence on new product performance, and the magnitude of the relationship between export EO and its consequences is dependent upon cultural context, country’s economic development level, industry type, and measurement treatment.

Originality: This meta-analysis is expected to provide fresh insights into the export EO literature by compiling previous empirical evidence on the export EO phenomenon, which has remained relatively untouched.

Keywords: Meta-analysis; entrepreneurial orientation, exporting

Paper type: General review

1. INTRODUCTION

It is indubitable that the marketplace has experienced a fundamental transformation over the last two decades (Lisboa et al., 2011). Combined with the disappearance of trade barriers, cutting-edge technology, and never-ending intensification of competition; new opportunities and challenges have arisen in the marketplace (Cadogan et al., 2016). In response to these developments, there has been an upsurge interest in the entrepreneurship domain (Kraus et al.,
Through the initial works of Miller (1983) and Lumpkin and Dess (1996) on EO, the construct has gained an aspirational appeal with its superior national and firm-level outcomes (Cadogan et al., 2016; Jin and Cho, 2018; Kirca et al., 2005; Wales et al., 2021). The existing research underlines the undeniable role of EO in firms’ survival and growth across markets (Fernández-Mesa and Alegrea, 2015). EO as a strategic posture denotes a firm’s understanding of conducting business and the extent of being in concert with its external environment through the predisposition of innovativeness, proactiveness, aggressiveness, risk-taking, and autonomy proclivities (Lumpkin and Dess, 1996). The ultimate premise of EO is to discern the critical resources that can enable firms to innovate and take risky and aggressive actions toward their rivals in the marketplace (Miao et al., 2017; Wu et al., 2008). As being one of the core factors that conduces firms to pursue opportunities in foreign markets; EO broadens the borders of businesses undertaken by international firms (Balabanis et al., 2004; Omri and Becuwe, 2014).

Exporting as the initial route to international markets proffers numerous opportunities for firms to reach new customers and utilize the economies of scale (Cavusgil and Zou, 1994; Leonidou et al., 2002). In this vein, entrepreneurially oriented firms are able to explore and capitalize on opportunities, overcome the difficulties of resource orchestration, increase their export scope and scale, develop more capabilities, produce new products and services, and foster export success (Soares et al., 2020; Fernández-Mesa and Alegrea, 2015; Miao et al., 2017; Monteiro et al., 2017). Commensurate with its numerous outcomes, EO has been addressed by a complementary line of research in the export context (Birru et al., 2020; Jin and Cho, 2018; Kuivalainen et al., 2007; Ribau et al., 2017; Taylor, 2013). Despite the proliferating research efforts, there is a lack of clarity on the association between EO and its consequences (Rosenbusch et al., 2013), which echoes the need for a meta-analytic synthesis to understand the nature of the association. While previous meta-analytic efforts focused on
the domestic context (Miao et al., 2017; Sinha et al., 2019), and a recent study conducted a bibliometric analysis that identifies its theoretical clusters (Wales et al., 2021), there is still a need to synthesize previous empirical studies addressing the EO within the export context.

In this comprehensive meta-analytic synthesis, it is revealed that the association between EO and its outcomes differs with a varying magnitude of effect size across studies (Boso et al., 2018; Martin and Javalgi, 2019). As such, in order to clarify this existing complexity, potential moderators are scrutinized, since researchers assert that national context elements can affect entrepreneurial activities (Frese et al., 2012; Wales et al., 2013). In essence, the determinative role of national culture as a contextual factor in entrepreneurial activities has been noticeably manifested (Kreiser et al., 2010; Saeed et al., 2014). In addition, entrepreneurial activities can be affected by the economic level of development of countries (Acs et al., 2008; Wilken, 1979). Industrial factors can also influence the level of entrepreneurial activities as the level of investments can vary across industries (Soares et al., 2020). Furthermore, different measurement treatments of the EO dimensions may unveil variations in the impact of EO on its consequences (Kreiser et al., 2002; Lomberg et al., 2017), as two primary but distinctive conceptualizations of EO exist in the literature regarding whether to evaluate the EO phenomenon with aggregated or separate measures (Wales et al., 2021). Drawing on these notions, this meta-analysis endeavors to elucidate the relationship between EO and its consequences in the export context, with a particular emphasis on the moderation effects of contextual factors including cultural, industrial, economic factors, and measurement treatment.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

EO, which has emerged as a crucial and an extensively researched area in the pertinent literature, is regarded as a key ingredient for attaining a sustainable competitive advantage
over the rivals in overseas markets (Coviello et al., 2011; Covin and Miller, 2014). EO or entrepreneurial proclivity refers to the strategic posture of a firm towards entrepreneurship (Anderson et al., 2015), which implies the operations and processes, inclining firms to explore and seize the opportunities across markets (Balabanis and Katsikea, 2003). EO research traces back to the early work of Miller (1983), who emphasized a view to decision-making strategy within a firm via proclaiming that entrepreneurial-oriented firms are targeted to foster innovation activities, enter new markets aggressively, and run the strategic and financial risks over seeking and exploiting a new opportunity across markets. In that vein, EO demonstrates the extent of firms’ strategic behavior proclivities that exist on a continuum ranging between more conservative and more entrepreneurial, facing decisions consisting of risk taking, innovativeness, and responsiveness, with an intent of seeking out opportunities and exploiting resources (Covin and Slevin, 1989; Kuivalainen et al., 2007; Lumpkin and Dess, 1996).

However, despite the burgeoning scholarly interest in the respected field of subject, no agreement on the dimensionality of EO has been achieved in the extant literature (Boso et al., 2017). An accumulated body of research considers the phenomenon as multifaceted and highlights its five distinct dimensions, involving risk-taking, innovativeness, competitive aggressiveness, proactiveness, and autonomy (Lumpkin and Dess, 1996). Innovativeness demonstrates the extent how firms stand open to new solutions, goods and operations, and alterations (Lisboa et al., 2011; Lumpkin and Dess, 2001), while risk-taking inclinations reflect the degree of tolerance of a firm to invest in risky businesses (Lumpkin and Dess, 1996). Further, proactiveness as an entrepreneurial approach assists firms to anticipate possible differences in markets and seize the opportunities before the competitors (Keh et al., 2007). Besides, aggressiveness symbolizes the propensity of a firm to intensely make attempts with an aim of improving its market position and surpassing the performance of its rivals in the market (Dess and Lumpkin, 2005), whereas autonomy implies the business atmosphere in
which organizational members have enough flexibility and freedom to develop new initiatives via the embodiment of opportunity seeking and advantage-seeking behaviors (Ireland et al., 2003). Figure 1 reveals the conceptual model of this meta-analytic investigation.

“Insert Figure 1 about here”

2.1. EO and Firm Resources & Capabilities

Drawing on resource-based view, EO has been widely acknowledged as being “a market-driving exploratory capability” (Boso et al., 2012a: 669), which exerts a big impact on the market structure and/or the conduct(s) of competitors in a manner that strengthens the competitive stance of the firm (Jaworski et al., 2000). In this sense, export EO is firmly intertwined with the improvement of firm resources and capabilities, as entrepreneurially oriented firms are more leaned toward engaging in the rearrangement of firm assets and competencies in order to capitalize on entrepreneurial circumstances (Boso et al., 2018; Jin et al., 2018). Notably, due to its strong attachment to “the pursuit of new market opportunities and the renewal of existing areas of operation” (Hult and Ketchen, 2001: 901), EO aims to continuously enhance a firm’s offerings by driving the bundle of resources and capabilities that the firm possesses (Lisboa et al., 2011; Martin and Javalgi, 2019). Building on these, empirical evidence on export EO provides ample support for the notion that EO is an antecedent to firm resources and capabilities, specifically, knowledge-based resources (e.g., Martin and Javalgi, 2019), marketing capabilities (e.g., Jin and Cho, 2018; Jin et al., 2018; Martin and Javalgi, 2016; 2019), organizational learning capabilities (e.g., Fernández-Mesa and Alegre, 2015; Lisboa et al., 2011), technological capabilities (e.g., Jin and Cho, 2018), and resource transformation capabilities (e.g., Boso et al., 2018).

H1: EO is positively related to firm resources & capabilities.

2.2. EO and Export Performance
Taking an entrepreneurial posture helps firms in an attempt to maximize their profits in particular foreign markets owing to its enthusiastic and dedicated stance in pursuing export activities with no regard to environmental circumstances (Balabanis and Katsikea, 2003). In this context, several researchers have examined the profound effect of EO in international markets; however, the empirical evidence produced mixed results in the pertinent literature (e.g., Rosenbusch et al., 2013; Wales, 2016). While some researchers established a favorable link between EO and export performance (e.g., Birru et al., 2020; Fernández-Mesa and Alegre, 2015; Rua et al., 2018), other articles demonstrated a negative association between EO and export performance (e.g., Kropp et al., 2006). On the other hand, some of them yielded curvilinear relationships (e.g., Cadogan et al., 2016), whereas others indicated insignificant linkages or partial supports among the constructs (e.g., Gerschewski et al., 2015; Zhang et al., 2012).

Besides, firms’ degree of export EO yields positive performance implications in international markets for several reasons: (a) firms are likely to experiment with new ideas and develop new products and practices, that are targeted to move their firm ahead of their rivals when expanding into global markets owing to its innovativeness (Li et al., 2010); (b) firms exploit the unforeseen opportunities in international markets in the sense of changing consumer demands, and product technologies with the help of proactiveness (Baker and Sinkula, 2009); (c) firms explore new foreign markets regardless of its dynamic and uncertain market conditions via risk-taking (Covin and Slevin, 1989). In line with this approach, firms with high EO have a chance of developing valuable strategic competencies that allow them to differentiate themselves from rivals via considering anticipated risks and new entry opportunities in foreign countries, and accordingly, enhance their performance in international markets (Gerschewski et al., 2015; Javalgi and Todd, 2011).

**H2:** EO is positively related to export performance.
2.3. *EO and New Product Performance*

Relying upon the dimensions of EO, the innovativeness dimension of EO by its nature helps exporters develop novel products with intent to meet their rapidly changing customer demands and preferences in foreign markets (Boso et al., 2012a). Further, its product innovation aspect also assists firms to outperform in markets in which rivals hold great power (Boso et al., 2012b). With respect to the risk-taking dimension, since export markets are characterized by highly competitive, uncertain and complex in general (Leonidou et al., 2002), the pursuit of exploiting new opportunities in marketplaces leads exporters to undertake both risky and innovative actions in international markets with full of underexploited opportunities owing to its dynamic nature (McDougall and Oviatt, 2000). Moreover, being proactiveness might help entrepreneurially oriented firms to early capture new opportunities in international markets, while being aggressive could be advantageous in highly competitive international markets and being autonomous might be helpful in responding rapidly to the competitor moves in foreign markets (Boso et al., 2012b). In that vein, EO allows firms to be successful at attaining the goals related to new product performance, as several scholars have addressed how EO improves the innovative activities within a firm (e.g., Baker and Sinkula, 2009; Knight and Cavusgil, 2004; Kropp et al., 2006; Wiklund and Shepherd, 2005). Moreover, because entrepreneurially oriented firms are more innovative than the others in the marketplace, they are inclined to develop unique products and processes that will have favorable effects on their new product performance across markets (Boso et al., 2012a).

**H3:** EO is positively related to new product performance.

2.4. *EO and Internationalization*

Firms pursuing higher levels of EO are more inclined to exploit new market opportunities with the intent to promote their existing and potential products worldwide (Dai et al., 2014;
Robertson and Chetty, 2000). Further, EO helps firms respond to competitors’ actions in an aggressive manner and anticipate the alterations in international markets (Boso et al., 2017; Covin and Miller, 2014). In the case of dynamic and competitive international environments, firms at higher EO levels surpass their rivals that lack entrepreneurial-oriented behaviors (Knight, 2000). Empirical evidence demonstrates how EO plays a major role in increasing a firm’s tendency towards further extending its cross-border activities (De Clercq et al., 2005; Wiklund and Shepherd, 2005) and reveals its influential effect on stimulating firms’ international expansion and performance across markets (Covin and Miller, 2014; Zhang et al., 2016).

More specifically, EO exerts a direct influence on the plans for expanding international operations in terms of scope of their foreign markets, since firms with higher EO have a higher enthusiasm to exploit foreign market opportunities regardless of how risky, uncertain, or physically and culturally distant the entry decision is (Calof and Viviers, 1995; Lumpkin and Dess, 1996; Miller, 1983). In this sense, they more readily accept the ambiguities in cross-border operations and are more willing to undertake decisions that are perceived as risky for their competitors (Acs et al., 1997; Zaheer and Mosakowski, 1997). Further, a proactive firm that regularly follows the changes in the environment and evaluates the foreign market opportunities in different countries foresees the favorable occasions before its rivals (for example, legal restrictions get more flexible in one market with a change in their political/legal environment), which in turn, directly affects their decisions to expand the scope of international activities (De Clercq et al., 2005; Lumpkin and Dess, 2001; Martin and Javalgi, 2019).

**H4:** EO is positively related to internationalization.

2.5. *Moderating Roles of Contextual and Measurement Factors*
Despite the universally accepted contributions of EO, researchers propound that ignorance of the environmental factors and focusing on merely the main effect of EO draws a fragmented perspective (Wiklund and Shepherd, 2005). In line with this notion, scholars assert that contextual differences can lead to potential variances in EO and correspondingly its outcomes (Wales et al., 2013). National culture, as one of the contextual factors, can affect entrepreneurial behavior and its outcomes. Consistent with this view, national culture can create a contingent effect on the consequences of EO (Rigtering et al., 2017; Semrau et al., 2016). Cultures that prioritize individual achievements, competition, and innovation can enable the emergence of entrepreneurial behaviors (House et al., 2004; Stephan and Uhlaner, 2010). Thus, cultural values can intervene in the association between EO and its consequences. Entrepreneurial orientation produces favorable performance-related outcomes, particularly in long term-oriented cultures (Rigtering et al., 2017). Further, cultural values that reinforce the standpoint of tolerance, with less power distance, lower uncertainty avoidance, and with masculine and individualistic orientations can promote the deployment of entrepreneurial spirit (Lee and Peterson, 2000).

\textbf{H5:} The association between EO and its consequences (firm resources & capabilities (a), export performance (b), new product performance (c), and internationalization (d)) is moderated by the cultural orientations.

Environmental factors can create contingency effects for organizations and their capabilities (Stinchcombe, 1965) and researchers pointed out the importance of addressing the outcomes of EO through a contingency perspective (Covin and Slevin, 1991). In this vein, the external environment denotes macro-level elements that reside in a country and can highly shape the operations of companies (Covin and Slevin, 1991). In conjunction with this view, Peng (2000) points out that the generalization of research findings may not be possible for countries from different economic levels. In this domain, the factors affecting EO can differ based on the
economic development level of a country (Acs et al., 2008). Thus, this can be the reason for underlying variations across countries with respect to the magnitude of EO (Autio, 2007; Lee and Peterson, 2000). Nations with advanced economic levels can create an appropriate environment with motives and opportunities that act as a conduit for engaging entrepreneurial behaviors (Wilken, 1979). Even though there exist some studies revealing that entrepreneurial orientation positively affects new venture performance in the domestic markets (Anwar et al., 2022), low-income countries may suffer from enabling required resources and adequate market incentives for firms to discover and capitalize on opportunities in the market (Lee and Peterson, 2000). Therefore, firms from developing countries can fail to reach critical resources for their international operations, which can hinder their international expansion and commitments (Bruton et al., 2008).

**H6:** The association between EO and its consequences (firm resources & capabilities (a), export performance (b), new product performance (c), and internationalization (d)) is moderated by the countries’ economic development level.

Firms’ task environment considerably affects the decisions, business actions, and performance outcomes of firms; thus, industry structure can have an impact on the degree of EO (Covin and Slevin, 1991; Miller, 1983). Regarding the moderating effect of industrial types, EO plays a crucial role for firms operating in high-tech industries since those industries reside in dynamic environments (Bahrami and Evans, 1987). Correspondingly, the survival of firms in high-tech industries that harbor hyper-competitive rivals extensively depends on their EO. In essence, in changing and hostile context which are featured high levels of uncertainty and rapid changes, limited resources, and intense rivalry, EO can enjoy the superior performance (Lumpkin and Dess, 2001) since by virtue of EO firms can develop new products and services, perform novel solutions, and pinpoint the opportunities to utilize (Kraus et al., 2012). Firms with higher entrepreneurial orientation are more inclined to be proactive in
overcoming the changes and take more risks in comparison with its rivals (Emami et al., 2021). The availability of opportunities is associated with loci of change and rapid industrial developments where the product life cycles are shorter than ever. In such environments, where technology dominates the whole industry, firms need to create products and processes by adopting innovative proclivity, which can lead to outperforming rivals and achieving a competitive advantage (Rosenbusch et al., 2013). In this sense, risk taking inclinations of managers also helps firms to survive in high-tech industries (Harms et al. 2010). In addition, firms in high-tech industries can face challenges in strategic decision-making due to rapid change and redundant resources, however, firms with high levels of EO can explore and exploit opportunities so that they allocate resources before their rivals.

**H7:** The association between EO and its consequences (firm resources & capabilities (a), export performance (b), new product performance (c), and internationalization (d)) is moderated by the industrial types.

In the EO literature, two dominant perspectives have been identified as to how to conceptualize the EO construct, focusing specifically on the dimensionality of the assessment (Covin and Wales, 2012; Wales et al., 2021). On the one side, Covin and Slevin (1989: 79), the main supporters of the unidimensional conceptualization of EO, have defended addressing EO as “a basic, unidimensional strategic orientation” with the aggregated effects of the three dimensions (i.e., innovation, proactiveness, and risk-taking). Even though this unidimensional conceptualization and operationalization of EO have recorded high degrees of reliability and validity in the related stream of research, on the other side, proponents of the multidimensional conceptualization of EO have raised their concerns regarding the psychometric properties of the unidimensional evaluation (Kreiser et al., 2002). In this sense, Lumpkin and Dess (1996), as the primary advocates of the multidimensional conceptualization, have suggested that the differential influences of the EO dimensions should
be examined to better understand the entrepreneurial process. Building on these distinctive approaches, it has been underlined that the impact of EO on its consequences can be dependent upon various measurement treatments of the EO dimensions (Kreiser et al., 2002; Lomberg et al., 2017).

**H1:** The association between EO and its consequences (firm resources & capabilities (a), export performance (b), new product performance (c), and internationalization (d)) is moderated by the measurement treatments.

3. METHODOLOGY

3.1. Study Identification

Four criteria were established to find out the stream of empirical literature on EO and its consequences: (a) to focus on the link between EO and its consequences as the primary research focus, (b) to assess EO on the basis of both its unidimensional and multidimensional nature, (c) to measure objectively and/or subjectively performance outcomes, and (d) to report Pearson’s correlation coefficients or its variants.

Accordingly, electronic and manual search methods were performed to detect eligible studies. Firstly, in harmony with the previous reviews (Rosenbusch et al., 2013; Wales et al., 2021), electronic databases (e.g., EBSCO, Elsevier, and Wiley) were scanned with the keywords “entrepreneurial orient*”, “strategic posture”, “corporate entrepreneurship”, “entrepreneurial behavior”, and “strategic orientation” in combination with “export”. Then, the references of the related articles were manually checked. In total, 107 studies were gathered, of these 24 were retained in the analysis with an inclusion rate of 22.4%. The final data set involves 71 effects from 25 independent samples based on more than 5,800 firms ($N = 5,815$). The quality of the articles covered in the sample was evaluated by resting on the academic guide of the
3.2. Coding Process

Three independent coders registered the data, gathered from 24 empirical studies published between 2000 and 2019, by relying on a coding protocol, which incorporates six main parts: (1) key study and methodological aspects (i.e., study name, year, journal, industry, country, sample size, unit of analysis, data collection method, response rate, reliabilities, and analytical approach), (2) conceptualizations of EO and its consequences, and accessible effect size statistics, (3) classification of national culture in terms of the masculinity dimension (Hofstede, 1997), depending upon the median split to separate the countries in the sample as low and high masculine (Kirca et al., 2005), (4) grouping countries with regard to economic development level - least developed, developing, and developed countries (United Nations, 2018), (5) separation of industry setting into high-tech and low-tech industries (OECD, 2011), and (6) categorization of measurement treatments of the EO dimensions with respect to aggregated vs. separate measures. By means of discussions, all controversies among the coders were settled and inter-coder reliability in the range between 90% and 95% was established (Szymanski and Henard, 2001).

3.3. Meta-Analytic Process

Firstly, in cases where EO was assessed in terms of various dimensions (e.g., innovativeness, risk-taking, proactiveness, aggressiveness, and autonomy), for which separate statistical numbers were reported, the arithmetic means of effect sizes were computed to find an overall score for the EO construct (e.g., Ellis, 2006; Grinstein, 2008). In this respect, measurement error was controlled by the division of respective effect sizes by the square root of the reliability values (Hunter and Schmidt, 2004). If the required information about internal
consistency could not be detected, then the mean reliabilities of the associated EO scales were substituted. Thereafter, the reliability-corrected correlations were converted into Fisher’s z-coefficients for data analysis, and these values were translated back into correlation coefficients to interpret the meta-analytic results.

Following these, the robustness of the research was evaluated by monitoring publication bias with respect to the three most widely applied statistical methods (Geyskens et al., 2009; Grewal et al., 2018): (1) Rosenthal’s (1979) ‘file drawer’ approach (the file drawer N number (4,690)), (2) Orwin’s (1983) ‘failsafe N’ (set to 0.05), and (3) the ‘trim-and-fill’ approach of Duval and Tweedie (2000). These statistical methods prove the low influence of publication bias. Besides, sensitivity analysis was made through the ‘one study removed’ option and forest plot analysis (Borenstein et al., 2009). Furthermore, a heterogeneity test was implemented, revealing considerable differences in effect sizes across articles ($Q$-value ($70_{ut}$) = 781.108 ($p = 0.000$), $I$-squared = 91.038), and the possible presence of moderators (Hunter and Schmidt, 2004); and thus, leading to the selection of the random-effects model (Cooper et al., 2009).

4. RESULTS

4.1. Direct Effects

By performing Comprehensive Meta-Analysis (CMA version 2.2.057) software, the proposed relationships between the theoretical constructs were tested. Table 1 presents the meta-analytic findings in relation to the main impact of EO on its consequences. The results reveal that EO gives rise to firm resources & capabilities ($r = 0.357$, CI$_{95\%}$ 0.262 to 0.445), which lends support to H$_1$. This meta-analytic result confirms that entrepreneurially oriented exporting firms have more tendency towards devoting efforts to cultivate resources and capabilities in an attempt to improve firm offerings, and ultimately, to exploit opportunities
apparent in both new and existing markets (Lisboa et al., 2011; Martin and Javalgi, 2019).

With regard to H2, EO was demonstrated to have a favorable and powerful association with export performance \((r = 0.373, \text{CI}_{95\%} 0.320 \text{ to } 0.424)\), conforming to the previous meta-analytic studies, addressing the link between EO and performance in domestic settings (e.g., Rosenbusch et al., 2013) and in harmony with prior research, revealing that firms with EO have more inclination towards developing unique strategic capabilities that enable them to move a step ahead of their competitors in capturing new entry opportunities and achieving great performance in international markets (e.g., Birru et al., 2020; Fernández-Mesa and Alegre, 2015).

"Insert Table 1 about here"

In support of H3, the findings of the meta-analysis provide the strongest empirical proof for a positive relationship between EO and new product performance \((r = 0.455, \text{CI}_{95\%} 0.321 \text{ to } 0.571)\). This result is in harmony with the prior studies in the extant literature, giving credibility to the perspective that companies with higher EO reveal outstanding performance in their innovation activities such as new product or process development across markets (e.g., Boso et al., 2012a; 2012b). In the case of H4, the results demonstrate that the linkage between EO and the scope of internationalization is significant and at a moderate level \((r = 0.277, \text{CI}_{95\%} 0.153 \text{ to } 0.393)\). In this sense, this finding is in contrasts with some prior studies in the pertinent literature (e.g., e.g., Boso et al., 2017; Zhang et al., 2012), providing partial support and revealing that not all sub-dimensions of EO drive the scope of internationalization (e.g., Boso et al., 2017; Zhang et al., 2012). In that vein, the synthesized results suggest that firms with greater EO are better at exploiting foreign market opportunities and accepting the ambiguities in international markets, which results in expanding the scope of international activities (e.g., De Clercq et al., 2005).

4.2. Moderator Effects
As suggested before, the moderator effects aim to depict the extent to which EO garners outcomes in export markets depending on the environmental conditions. In this vein, the moderators encompass the cultural (H5), economic (H6), industrial (H7), and measurement effects (H8) that affect the association between EO and its outcomes (Table 2). While H5a,b,c,d are supported with a surprising significant effect of masculinity (respectively; Q-value (df = 1) = 31.225* (p < 0.05), Q-value (df = 1) = 6.581* (p < 0.05), Q-value (df = 1) = 10.392* (p < 0.05), ((Q-value (df = 1) = 3.909* (p < 0.05)) as the results indicate that masculine cultures are only high in terms of new product performance-related outcomes of EO ((Q-value (df = 1) = 10.392* (p < 0.05)). While the results were expected to be in favor of masculinity, since masculine cultures are considered to be more assertive and promote entrepreneurship, the results indicate vice versa except for new product performance. According to some scholars, in masculine societies, individuals are more assertive and aggressive which can hamper the utilization of resources and EO (House et al., 2004; Miao et al., 2017). In addition, societies low in masculinity can garner a more positive social environment with tolerance for failure to promote EO (House et al., 2004). With those assertions in mind, the results indicate that masculinity significantly moderates the relationship between EO and its outcomes. In terms of new product performance, masculinity is associated with high levels of innovativeness which is a significant part of EO. In line with this view, new product performance of entrepreneurial-oriented firms is higher in cultures high in masculinity that encourage innovation (House et al., 2004; Stephan and Uhlaner, 2010).

Regarding the moderation effect of economic development level of countries (H6), the results indicate that countries’ economic development level has a moderating role in the association between EO and its outcomes except for the relationship between EO and internationalization ((Q-value (df = 1) = 1.869* (p > 0.05)). Therefore, H6a, b, c are supported (respectively; Q-value (df = 1) = 20.680* (p < 0.05), Q-value (df = 1) = 4.824* (p < 0.05), Q-value (df = 1) =
10.392* (p < 0.05)). While in developed countries, the effect of EO on new product performance and resource capabilities is higher, as an outcome, export performance is higher in least-developed countries, which is in line with the study reporting its positive impacts on new venture performance (Anwar et al., 2022). As aforementioned, developed countries can harbor necessary resources with numerous opportunities to conduce EO (Wilken, 1979). On the other hand, low-income countries can suffer from enabling required resources, especially a highly educated workforce for innovation and utilization of opportunities in the market (Lee and Peterson, 2000). Inadequate human and financial resources in the least developed countries can limit their innovative activities and therefore, it can detriment new product performance (Rialp-Criado and Komochkova, 2017). Therefore, the association between EO and firm resources & capabilities, new product performance, and internationalization can be higher in developed countries. In addition, firms in emerging markets can highly rely on their entrepreneurial capabilities to boost their performance in export markets (Birru et al., 2020). These findings support the notion that while EO yields significantly important outcomes in export markets, the economic development level of the country can affect these outcomes except for the degree of internationalization.

Furthermore, the extent to which industrial factors shape the outcomes of EO in export markets is analyzed. The results show that EO is important regardless of the industry type, however, in terms of firm resources & capabilities and internationalization, the moderation effect is significant (respectively; Q-value (df = 1) = 31.246* (p < 0.05), Q-value (df = 1) = 3.909* (p < 0.05)). However, the association is relatively stronger in non-tech industries in terms of export performance and internationalization. It can be due to the reason that as advanced technologies can influence the majority of the industries significantly, although, the core business is not technology-intensive such as transportation and communication
technologies (Oviatt and Mcdougall, 2005), which may affect the integration of entrepreneurial activities into export success and internationalization.

As for the proposed moderating role of the measurement treatments of the EO dimensions in the association between EO and its consequences, divergent findings have been found. In this respect, no significant variations were registered for the influence of EO neither on export performance (Q-value (df = 1) = 1.726 (p > 0.05)) nor on internationalization (Q-value (df = 1) = 0.177 (p > 0.05)) across aggregated or separate measures of EO. However, the meta-analytic findings demonstrate that the EO’s relationship with both firm resources & capabilities and new product performance is suggested to be dependent on whether the EO dimensions are aggregates or separately assessed (respectively; Q-value (df = 1) = 6.983* (p < 0.05), Q-value (df = 1) = 12.671* (p < 0.05)), which lends support to H8a, c. Specifically, the magnitude of the association between EO and firm resources & capabilities is stronger in case the EO construct is measured with aggregated measures, which is also valid for the strength of the linkage between EO and new product performance. Despite the increasing interest in conceptualizing and operationalizing the EO construct from the multidimensional perspective, this finding is in the same direction as the prevailing trend in the relevant literature to use the unidimensional indicators for measuring EO (Wales et al., 2011), which has been strongly proposed in the initial contributions to the EO research (e.g., Covin and Slevin, 1989; Miller, 1983). Through the lens of moderation effects, all the results indicate that EO acts a boosting role in outcomes within export markets which can be higher or lower based on the cultural orientations, countries’ economic development levels, industry types, and measurement treatments.

5. IMPLICATIONS

5.1. Implications for Theory
Due to the existence of a great extent of studies devoted to investigating the linkage between EO and its consequences, the present research endeavors to perform a meta-analytic study to synthesize and aggregate all previous findings by the way of integrating independent results of different studies and revealing potential moderator variables that affect the relationship between EO and its outcomes. First, the cumulative results demonstrate that EO acts as a critical stimulus role in triggering the innovative activities within a company across the markets, which is in harmony with the studies in the extant literature (e.g., Boso et al., 2012a). In other words, exporters with high EO tend to attain their goals related to innovative activities such as new product or process development, since entrepreneurially oriented behaviors provide greater inclination to make investments into risky and ambiguous projects in international markets, which finally will make effort to improve their export performance in the long run (Baker and Sinkula, 2009; Knight and Cavusgil, 2004).

Second, the empirical results reveal that masculine cultures stimulate entrepreneurially oriented behaviors in enhancing new product performance. This is in parallel with the prior work on EO, which gives countenance to the promotion of entrepreneurial spirit in a cultural context with higher masculinity (e.g., Lee and Peterson, 2000). Nevertheless, the cumulative findings also support that not only culture with higher masculinism but also with higher femininity is inclined to foster the role of EO in developing firm resources/capabilities and improving internationalization and export performance. Another insightful contribution of the present study is to demonstrate how developed countries are better in the exploitation of resources that is aimed to invest in innovative activities for their entrepreneurial intentions within a firm, which is in harmony with the previous studies that favor EO behaviors in developed countries (e.g., Wilken, 1979). Besides, the aggregate results contribute to the intellectual body of literature by putting emphasis on technology intensity levels of industry, providing notable implications of EO on both firm resources & capabilities and
internationalization. Lastly, the meta-analytic findings spotlight how the use of unidimensional measures of EO strengthens the EO’s correlation with both firm resources & capabilities and new product performance, which corresponds to the suggestion that different measurement treatments should be considered to better comprehend the EO phenomenon (Kreiser et al., 2002; Lomberg et al., 2017) and the dominant tendency to conceptualize EO from the unidimensional approach (Wales et al., 2011).

In this sense, this research adds to the pertinent literature in various manners: (1) consolidating and quantitatively synthesizing all cumulative findings related to EO within the exporting context via employing an integrative perspective; (2) giving crucial insights into the outcomes of EO by means of putting special emphasis on the critical ones in the pertinent literature; (3) uncovering the moderating impacts of contextual (i.e., country’s economic development level, cultural differences, and industrial characteristics) and measurement factors (i.e., measurement treatment) on the relationship between EO and its outcomes; and (4) providing comprehensive understanding for both scholars and practitioners through the way of aggregating and encapsulating fragmented empirical findings in the extant literature.

5.2. Implications for Managers

Through the lens of this meta-analytical perspective, a few comments can be explicated in order to provide insightful implications for managers and policymakers. First, managers are advised to put a special emphasis on developing novel products and processes that produce outstanding outcomes for their new product performance in the international arena, as firms with higher EO have a greater inclination to enhance innovative activities (Boso et al., 2012a). Another advantageous managerial direction could be concentrating on encouraging the entrepreneurial spirit within an organization to seize the underdeveloped opportunities that could provide access to idiosyncratic resources and capabilities (Balabanis and Katsikea, 2003). Besides, firms with higher entrepreneurial proclivity are suggested to follow a
guideline, encapsulating the steps of developing innovative products/processes, seizing the resources & capabilities, and boosting the export performance for the achievement of success in international markets.

As the results indicate the boosting effect of EO under the contextual factors, managers can stimulate firms’ entrepreneurial proclivity through developing an appropriate culture and climate that promotes innovation, proactiveness, aggressiveness, risk-taking, and autonomy by taking the interplay between EO and its outcomes in export markets. In this sense, managers should also note that different cultural environments yield diverse entrepreneurially-oriented outcomes for firms operating in foreign markets. In that vein, managers should be aware of local cultural differences across markets, as cultural tendencies play a considerable role in promoting entrepreneurial spirits among the employees (Lee and Peterson, 2000). For instance, managers are recommended to emphasize innovative outputs of EO in cultures with higher masculinism, which put higher attention on materialism and wealth, while femininity dimension that is characterized by a higher degree of harmony and relationships, should be considered in developing resources & capabilities by the help of entrepreneurial proclivity.

Further, export managers should not only focus on developed countries to initiate their entrepreneurially-oriented activities but also target developing countries that could help them enhance internationalization and export performance. Moreover, managers are advised to initiate entrepreneurial activities with the intent of developing specific resources & capabilities regardless of the technology intensity level of industries. In addition, policymakers should enable more incentives to foster and implement entrepreneurial business activities of firms by emphasizing the critical role of entrepreneurial behaviors of firms to boost firm performance and national economic growth. With the aim of motivating EO,
policymakers can particularly provide cultural, institutional, and financial support for the firms.

5.3. Limitations and Future Research Directions

The findings of this meta-analytic research should be evaluated in light of certain limitations. Firstly, the statistical data covered in this meta-analysis is confined to the empirical articles presenting correlation coefficients or statistics which can be transformed into correlation coefficients, implying that this study failed to contain all empirical research on export EO. Secondly, the differential impacts of the dimensions of export EO (e.g., innovativeness, risk-taking, proactiveness, aggressiveness, and autonomy) on its consequences were not considered in this meta-analytic review. Thirdly, this meta-analytic investigation focuses only on the influence of several contextual and measurement moderators on the relationship between export EO and its outcomes. And, finally, another important concern could be the lack of examination of the factors that are conducive to export EO.

Based upon these limitations, this meta-analytic review offers valuable avenues for further research to enhance the existing knowledge of EO in the export setting. Accordingly, subsequent research would be assigned to shedding light on the particular impacts of EO’s dimensions on its consequences. Moreover, as moderating variables additional measurement factors such as measurement scale, objective/subjective indicators, sample size, etc. are suggested to be included in conceptual frameworks in further research. Furthermore, another future research direction might be a comprehensive meta-analysis on the EO’s outcomes in integration with its determinants, expected to offer fruitful insights into the pertinent literature.

References


Figure 1: Conceptual Model of Meta-Analysis

Entrepreneurial Orientation

Firm resources & capabilities

Performance-related outcomes
- Export performance
- New product performance

Internationalization

Contextual & Measurement Factors
(1) Cultural context
(2) Economic development
(3) Industrial settings
(4) Measurement treatment
Table 1: Summary of the meta-analytic findings for the relationship between EO and its consequences

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>The links</th>
<th># of effects</th>
<th>Total N</th>
<th>Corrected r</th>
<th>Standard Error, r</th>
<th>-95% LCL</th>
<th>+95% UCL</th>
<th>Q-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>EO → Firm resources &amp; capabilities</td>
<td>23</td>
<td>1,862</td>
<td>0.357</td>
<td>0.021</td>
<td>0.262</td>
<td>0.445</td>
<td>388.190*</td>
</tr>
<tr>
<td>H2</td>
<td>EO → Export performance</td>
<td>36</td>
<td>2,777</td>
<td>0.373</td>
<td>0.009</td>
<td>0.320</td>
<td>0.424</td>
<td>312.573*</td>
</tr>
<tr>
<td>H3</td>
<td>EO → New product performance</td>
<td>7</td>
<td>376</td>
<td>0.455</td>
<td>0.026</td>
<td>0.321</td>
<td>0.571</td>
<td>46.181*</td>
</tr>
<tr>
<td>H4</td>
<td>EO → Internationalization</td>
<td>5</td>
<td>540</td>
<td>0.277</td>
<td>0.016</td>
<td>0.153</td>
<td>0.393</td>
<td>11.034*</td>
</tr>
</tbody>
</table>

*significant at $p < 0.05$. 
<table>
<thead>
<tr>
<th>Hypothesized Moderation Links</th>
<th># of effects</th>
<th>Total N</th>
<th>Corrected r</th>
<th>Standard Error</th>
<th>-95% LCL</th>
<th>+95% UCL</th>
<th>Q-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H5</strong></td>
<td>EO ➔ Firm Resources &amp; Capabilities (a)</td>
<td>- Low Masculinity</td>
<td>8</td>
<td>1,227</td>
<td>0.583</td>
<td>0.024</td>
<td>0.481</td>
</tr>
<tr>
<td></td>
<td>- High Masculinity</td>
<td>15</td>
<td>1,160</td>
<td>0.215</td>
<td>0.007</td>
<td>0.151</td>
<td>0.278</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Export Performance (b)</td>
<td>- Low Masculinity</td>
<td>2</td>
<td>102</td>
<td>0.365</td>
<td>0.009</td>
<td>0.310</td>
</tr>
<tr>
<td></td>
<td>- High Masculinity</td>
<td>34</td>
<td>3,687</td>
<td>0.527</td>
<td>0.015</td>
<td>0.416</td>
<td>0.623</td>
</tr>
<tr>
<td></td>
<td>EO ➔ New Product Performance (c)</td>
<td>- Low Masculinity</td>
<td>1</td>
<td>212</td>
<td>0.184</td>
<td>0.032</td>
<td>0.328</td>
</tr>
<tr>
<td></td>
<td>- High Masculinity</td>
<td>6</td>
<td>685</td>
<td>0.494</td>
<td>0.372</td>
<td>0.599</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Internationalization (d)</td>
<td>- Low Masculinity</td>
<td>1</td>
<td>214</td>
<td>0.404</td>
<td>0.000</td>
<td>0.285</td>
</tr>
<tr>
<td></td>
<td>- High Masculinity</td>
<td>4</td>
<td>209</td>
<td>0.234</td>
<td>0.014</td>
<td>0.108</td>
<td>0.353</td>
</tr>
<tr>
<td><strong>H6</strong></td>
<td>EO ➔ Firm Resources &amp; Capabilities (a)</td>
<td>- Developed</td>
<td>12</td>
<td>1,752</td>
<td>0.493</td>
<td>0.025</td>
<td>0.385</td>
</tr>
<tr>
<td></td>
<td>- Developing</td>
<td>11</td>
<td>635</td>
<td>0.194</td>
<td>0.005</td>
<td>0.133</td>
<td>0.254</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Export Performance (b)</td>
<td>- Developed</td>
<td>24</td>
<td>2,531</td>
<td>0.376</td>
<td>0.010</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>- Developing</td>
<td>10</td>
<td>1,199</td>
<td>0.302</td>
<td>0.008</td>
<td>0.228</td>
<td>0.372</td>
</tr>
<tr>
<td></td>
<td>- Least-Developed</td>
<td>2</td>
<td>159</td>
<td>0.653</td>
<td>0.202</td>
<td>0.251</td>
<td>0.863</td>
</tr>
<tr>
<td></td>
<td>EO ➔ New Product Performance (c)</td>
<td>- Developed</td>
<td>6</td>
<td>685</td>
<td>0.494</td>
<td>0.023</td>
<td>0.372</td>
</tr>
<tr>
<td></td>
<td>- Developing</td>
<td>1</td>
<td>164</td>
<td>0.184</td>
<td>0.000</td>
<td>0.032</td>
<td>0.328</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Internationalization (d)</td>
<td>- Developed</td>
<td>1</td>
<td>92</td>
<td>0.406</td>
<td>0.000</td>
<td>0.220</td>
</tr>
<tr>
<td></td>
<td>- Developing</td>
<td>4</td>
<td>331</td>
<td>0.248</td>
<td>0.015</td>
<td>0.104</td>
<td>0.381</td>
</tr>
<tr>
<td><strong>H7</strong></td>
<td>EO ➔ Firm Resources &amp; Capabilities (a)</td>
<td>- High-tech</td>
<td>11</td>
<td>362</td>
<td>0.201</td>
<td>0.006</td>
<td>0.132</td>
</tr>
<tr>
<td></td>
<td>- Non-high-tech</td>
<td>3</td>
<td>150</td>
<td>0.203</td>
<td>0.012</td>
<td>0.083</td>
<td>0.316</td>
</tr>
<tr>
<td></td>
<td>- Mixed</td>
<td>9</td>
<td>1,500</td>
<td>0.551</td>
<td>0.021</td>
<td>0.452</td>
<td>0.636</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Export Performance (b)</td>
<td>- High-tech</td>
<td>12</td>
<td>450</td>
<td>0.367</td>
<td>0.008</td>
<td>0.298</td>
</tr>
<tr>
<td></td>
<td>- Non-high-tech</td>
<td>6</td>
<td>321</td>
<td>0.454</td>
<td>0.056</td>
<td>0.247</td>
<td>0.621</td>
</tr>
<tr>
<td></td>
<td>- Mixed</td>
<td>18</td>
<td>2,543</td>
<td>0.349</td>
<td>0.011</td>
<td>0.277</td>
<td>0.417</td>
</tr>
<tr>
<td></td>
<td>EO ➔ New Product Performance (c)</td>
<td>- Non-high-tech</td>
<td>4</td>
<td>314</td>
<td>0.461</td>
<td>0.047</td>
<td>0.257</td>
</tr>
<tr>
<td></td>
<td>- Mixed</td>
<td>3</td>
<td>385</td>
<td>0.447</td>
<td>0.051</td>
<td>0.222</td>
<td>0.627</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Internationalization (d)</td>
<td>- Non-high-tech</td>
<td>1</td>
<td>214</td>
<td>0.404</td>
<td>0.000</td>
<td>0.285</td>
</tr>
<tr>
<td></td>
<td>- Mixed</td>
<td>4</td>
<td>209</td>
<td>0.234</td>
<td>0.014</td>
<td>0.108</td>
<td>0.353</td>
</tr>
<tr>
<td><strong>H8</strong></td>
<td>EO ➔ Firm Resources &amp; Capabilities (a)</td>
<td>- Aggregated</td>
<td>7</td>
<td>404</td>
<td>0.510</td>
<td>0.059</td>
<td>0.376</td>
</tr>
<tr>
<td></td>
<td>- Separate</td>
<td>16</td>
<td>1,868</td>
<td>0.285</td>
<td>0.013</td>
<td>0.182</td>
<td>0.382</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Export Performance (b)</td>
<td>- Aggregated</td>
<td>9</td>
<td>778</td>
<td>0.432</td>
<td>0.043</td>
<td>0.329</td>
</tr>
<tr>
<td></td>
<td>- Separate</td>
<td>27</td>
<td>2,996</td>
<td>0.354</td>
<td>0.007</td>
<td>0.293</td>
<td>0.411</td>
</tr>
<tr>
<td></td>
<td>EO ➔ New Product Performance (c)</td>
<td>- Aggregated</td>
<td>4</td>
<td>323</td>
<td>0.565</td>
<td>0.014</td>
<td>0.474</td>
</tr>
<tr>
<td></td>
<td>- Separate</td>
<td>3</td>
<td>376</td>
<td>0.293</td>
<td>0.014</td>
<td>0.163</td>
<td>0.414</td>
</tr>
<tr>
<td></td>
<td>EO ➔ Internationalization (d)</td>
<td>- Aggregated</td>
<td>2</td>
<td>209</td>
<td>0.314</td>
<td>0.029</td>
<td>0.081</td>
</tr>
<tr>
<td></td>
<td>- Separate</td>
<td>3</td>
<td>331</td>
<td>0.253</td>
<td>0.032</td>
<td>0.068</td>
<td>0.421</td>
</tr>
</tbody>
</table>

*significant at p < 0.05.