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Linking Entrepreneurial Orientation to Environmental Collaboration: A Stakeholder Theory and Evidence from Multinational Companies in an Emerging Market

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Revisiting stakeholder theory as a potential theory of the firm giving rise to expectations about organizing, we analyze when and under what circumstances entrepreneurially oriented firms increase their environmental collaboration with suppliers. Specifically, we investigate the association between entrepreneurial orientation and environmental collaboration with suppliers by accounting for the degree of employees' work engagement and market environment complexity as stakeholder-oriented moderators of this relationship. We test our hypotheses using multi-level analyses on 249 managers nested in 66 multinational companies (MNCs) in Turkey. We find that entrepreneurial orientation positively impacts environmental collaboration with suppliers. A high level of work engagement (as an organizing principle favouring a stakeholder focus) and a low level of market environment complexity (as an organizing principle favouring the customer as an instrumental stakeholder) moderate this linkage. We enrich the debate on entrepreneurial orientation, strategy, and environmental sustainability by providing logic rooted in stakeholder theory of the conditions under which MNCs' entrepreneurial orientation in emerging markets prioritizes and privileges environmental collaboration with suppliers.

Introduction

Environmental collaboration, defined as the extent to which an organization cooperates with its suppliers on environmental goals, objectives, and initiatives (Golgeci *et al.*, 2019), is increasingly vital for an integrated environmental strategy for multinational companies (MNCs), especially those with large international operations in emerging markets. These MNCs face intense pressures from governments and other stakeholders to prioritize sustainable supply chains and accomplish environmental objectives (Akhtar *et al.*, 2018; Bouguerra *et al.*, 2021; Durand and Jacqueminet, 2015). For instance, the UK's Modern Slavery Act (2015) compels commercial organizations trading in the UK with a turnover of over £36 million to produce annual statements specifying what steps they

have taken to eradicate forced labour from their organizations and their supply chains, *wherever* they may reside. This Act creates considerable legal risks to companies with subsidiaries or suppliers in emerging markets, where the risk of forced labour involvement is estimated to be high (Benstead, Hendry and Stevenson, 2018). For these MNCs, environmental collaboration with their suppliers is a potential solution to achieving their own sustainability goals (Gold, Hahn and Seurig, 2013) and supporting the sustainability of their suppliers (Locke and Romis, 2007), and is a response to ubiquitous stakeholder pressure. Calls for environmental sustainability have intensified social concerns and public pressure on MNCs to innovate pro-environment initiatives (Rahman, Aziz and Hughes, 2020). However, while stakeholder theory identifies the stakeholders of an organization (stakeholder identification) and considers the conditions under which managers attribute importance to specific stakeholder groups (stakeholder salience) (Freeman, 2015; Phillips, 2003; Phillips, Freeman and Wicks, 2003), more work is needed to understand why a firm organizes in a particular way to support environmental collaboration with suppliers, and the boundary conditions that cause it to privilege (or deprioritize) suppliers in favour of other stakeholders.

We revisit stakeholder theory as a theory of the firm (Brenner and Cochran, 1991; Donaldson and Preston, 1995), proposing that the now-ubiquitous pressure on corporations to act sensitively to stakeholders and the environment gives rise to forms of organizing that enable this action. We predict that MNCs with an entrepreneurial orientation (EO) are more likely to work closely with suppliers to achieve environmental, green, and sustainability goals. MNC EO represents a strategic posture emphasizing practices, processes, and behaviours involving risk-taking, innovativeness and proactiveness (Covin and Slevin, 1991; Engelen *et al.*, 2014; Hughes and Chang *et al.*, 2021a). An EO steers the corporation to develop new activities and reconfigure existing ones to remain competitively relevant, especially in foreign markets (Chen *et al.*, 2020) and when environmental pressures are high and fluid (Williams and Lee, 2009). Many studies associate an EO with environmental performance, but the results are mixed (see Table 1), often confounding subsets of EO while attempting to understand when EO increases or decreases a firm's environmental performance (Chavez *et al.*, 2020; Gali *et al.*, 2020; Karmann *et al.*, 2016; Shafique, Kalyar and Mehwish, 2021). We believe that the answer to these mixed effects lies in the failure to break down the long-linked relationship between EO and environmental performance by considering the effects of EO on environmental collaboration with suppliers. Studies demonstrate that environmental collaboration is an essential condition for environmental performance (see Table 2). An MNC lacking in EO would be more likely to focus inwards and form defensive strategies owing to risk aversion, passiveness and a preference for efficiency. Entrepreneurially oriented MNCs are more likely to develop new initiatives to improve the environmental performance of operations, products and services. This thesis remains untested. Revisiting the stakeholder theory of the firm, we predict that the MNC that organizes around EO will exhibit greater environmental collaboration as a solution to satisfy critical stakeholders and achieve its environmental goals.

We expect that boundary conditions affect how MNCs respond to environmental pressures (Clarke and Boersma, 2017). EO is prone to contextual factors that may affect its object of interest (Yin, Hughes and Hu, 2020). Following Phillips *et al.*'s (2003) depiction of the frontiers of stakeholder theory and its instrumental stakeholder variant (Jones, 1995; Jones, Harrison and Felps, 2018; Rahman, Aziz and Hughes, 2020), we propose that boundary conditions change which stakeholders are prioritized by the MNC, moderating the extent to which its EO steers to or from environmental collaboration with suppliers. Entrepreneurial firms create, define, discover and exploit opportunities to remain competitive and relevant. Ultimately, an EO is a resource-hungry strategic posture (Covin and Wales, 2019; Hughes *et al.*, 2015) carrying an underlying commercial focus (Gali *et al.*, 2020). First, applying the logic of instrumental stakeholder theory, we expect that a greater level of market environment complexity compels the firm to refocus on the customer as the crucial stakeholder (Rahman, Aziz and Hughes, 2020) of the threats to its competitive relevance. We theorize that the entrepreneurially oriented MNC will refocus from environmental collaboration with suppliers and direct its entrepreneurial investments towards its customers. Second, through stakeholder theory, we anticipate that employees highly engaged in their work will support MNCs' stakeholder-serving efforts, as

Table 1. Key studies on the relationship between EO and environmental/social performance

Author(s)	Theoretical perspective used	Methods used	Types of outcomes	Nature of relationship between EO and environmental/ social outcomes	Main findings
Zhang, Wang and Jia (2021)	Upper echelon theory	Study 1: 166 CEOs	Corporate philanthropy	Direct	CEO EO (a subset of EO focused on the individual [CEO] level) leads to higher engagement in CSR innovation than in corporate philanthropy. The effect of CEO EO on form choice of CSR activities is moderated by a few situational factors, such as state ownership and incoming/departing CEO.
		Study 2: 133 firm-year observations	CSR innovation		
Shafique, Kalyar and Mehwish (2021)	Social capital theory	Survey of 339 SMEs	Environmental performance	Direct/mediator	Green EO (GEO; a subset of EO) has a significant positive relationship with the environmental performance of SME firms. Also, GEO positively mediates the relationship between ambidexterity and environmental performance.
Gali *et al.* (2020)	Stakeholder theory	Survey of 1156 Austrian firms	Social performance and financial performance	Direct and indirect	Social EO (SEO; a subset of EO) negatively affects financial performance but positively affects social performance. Social performance mediates the effects of SEO on financial performance, booming positive through SEO.

Table 1. (Continued)

Author(s)	Theoretical perspective used	Methods used	Types of outcomes	Nature of relationship between EO and environmental/ social outcomes	Main findings
Chavez *et al*. (2020)	Resource orchestration theory	A survey with 112 firms in Chile	Environmental, social, and economic – collectively referred to as the triple bottom line (TBL)	Direct	The indirect effects of EO on environmental performance, social performance, and operational performance, via internal lean practices, are positive and significant. In addition, the direct effects of EO on environmental performance and social performance are not significant.
Tang and Tang (2018)	Stakeholder management theory	A survey with 149 SMEs in China	Environmental, social, and governance (ESG) environmental scale	Indirect	The congruence in stakeholders' CSR orientation enhances environmental performance, and the moderating impact of congruence is weaker when EO is higher.
Marshall *et al*. (2015)	Strategic choice theory	A survey with 159 firms	Social sustainability supply chain adoption	Indirect	EO impacts and moderates social sustainability culture in advanced social sustainability supply chain adoption
Karmann *et al*. (2016)	Principal-agent theory	A survey with 411 firms	Organizational corruption	Direct	There is a negative relationship between innovativeness and organizational corruption. There is a positive relationship between risk-taking and organizational corruption. The relationship between proactiveness and organizational corruption is not significant.

Abbreviations: CEO, Chief Executive Officer; EO, entrepreneurial orientation; CSR, corporate social responsibility; GEO, green entrepreneurial orientation; SME, small-to-medium enterprise; SEO, social entrepreneurial orientation; TBL, triple bottom line; ESG, environmental; social and governance.

Table 2. Key studies on the implications of environmental collaboration for environmental performance

Author(s)	Theoretical perspective used	Methods used	How has environmental collaboration been used?	Main findings
Bouguerra *et al*. (2021)	Microfoundations view	A sample of 249 MNEs in Turkey	Outcome (DV) of operational agility	Operational agility positively affects environmental collaboration with suppliers. Operational agility through individual creativity and flexible work arrangements leads to greater environmental collaboration.
Golgeci *et al*. (2019)	Relational view	A sample of 270 firms in Turkey	Mediator	Environmental collaboration mediates the impact of social capital and relational capability on environmental performance.
Bae and Grant (2018)	Stakeholder view	A sample of 222 firms in Korea	Outcome (DV) of learning capability and organizational culture Antecedents (IV) of environmental performance	Learning capability was found to positively affect environmental collaboration. However, organizational culture does not affect environmental collaboration. Environmental collaboration was found to positively affect environmental performance.
Grekova *et al*. (2016)	Extended resource-based view	Survey with 139 Dutch food and beverage firms	Antecedent (IV) of firm performance	Environmental collaboration with suppliers can improve performance (cost savings). However, collaboration is not likely to assist firms seeking to improve the environmental sustainability of their internal processes.

Table 2. (Continued)

Author(s)	Theoretical perspective used	Methods used	How has environmental collaboration been used?	Main findings
Paulraj, Jayaraman and Blome (2014)	Relational exchange view	A survey with 114 US firms	Outcome (DV) of governance mechanisms (process and structural) Mediator between governance mechanisms and environmental and social performance	There is a positive impact of process governance mechanisms on environmental collaboration. However, the impact of structural governance mechanisms on environmental collaboration was found to be insignificant. Also, environmental collaboration positively mediates governance mechanisms and environmental and social performance.
Vachon and Klassen (2008)	Natural resource-based view	Semi-structured interviews with six executives and a survey with 366 plants	Antecedent of firm performance (quality, cost, delivery) and environmental performance	There is a positive link between environmental collaboration with suppliers and manufacturing performance. Also, environmental collaboration with suppliers positively affects environmental performance.

Abbreviations: MNE, multinational enterprise; DV, dependent variable; IV, independent variable; US, United States.

they feel part of the business. Indicative of the enthusiasm, effort and commitment they have for their work (Gutermann *et al*., 2017; Salanova, Agut and Peiró, 2005), engaged employees are more likely to dedicate considerable time and effort to supporting organizational initiatives (Davis *et al*., 2019), remain steadfastly emotionally engaged to the firm (Petrou, Demerouti and Schaufeli, 2018), and be more likely to support its stakeholder initiatives with suppliers. The degree to which employees are deeply engaged in their work reflects how the MNC enthuses its employees. We theorize that MNCs whose employees exhibit high work engagement will focus on translating EO efforts into environmental collaboration with suppliers and direct their entrepreneurial investments towards its customers. These theoretically derived boundary conditions remain untested.

We test our multi-level contingency model using multisource data acquired from a sample of 249 managers nested in 66 MNCs in Turkey. Our study provides three crucial contributions. First, stakeholder theory is presented as a mid-range theory predicting how stakeholders' interests are served but neglecting the form of organizing that may privilege one set of stakeholders over another (Donaldson and Preston, 1995). Revisiting the stakeholder theory of the firm and its usefulness in anticipating how organizations operate and predicting organizational behaviour, we provide a stakeholder theory for EO. We contribute a theoretical model and logic that predicts the extent to which MNC EO shapes environmentally oriented behaviour (environmental collaboration with suppliers) instead of environmental (or social) performance. Our theory and model provide the essential missing link in the otherwise long-linked relationship between EO and such performance (Chavez *et al*., 2020; Gali *et al*., 2020; Shafique, Kalyar and Mehwish, 2021).

Second, we enrich our stakeholder theory of EO by accounting for two theoretically relevant boundary conditions that act as contingencies of the relationship between MNCs' EO and the extent of their environmental collaboration with suppliers. We predict that work engagement (an internal contingency) and market environment complexity (an external environment contingency) positively and negatively moderate this relationship. Our theory directly accounts for contingencies that change stakeholder salience and for an essential (but neglected) feature of stakeholder theory, namely that an organization cannot privilege all stakeholders equally.[1] We provide two new boundary conditions that predict a shift in stakeholder emphasis that increases (in the case of work engagement) and decreases (in the case of market environment complexity) the extent to which entrepreneurially oriented MNCs work with suppliers on environmental issues.

Third, we provide a test of our stakeholder theory and supply statistical evidence of its predictive validity. Our findings provide a new understanding of EO's multi-level and bounded nature in predicting environmental collaboration among MNCs in emerging markets. Our model and test provide scholars and managers with a much-needed theoretical framework and data to successfully manage intense pressures from governments and other stakeholders to prioritize sustainable supply chains (Akhtar *et al*., 2018; Durand and Jacqueminet, 2015), innovate pro-environment initiatives (Rahman, Aziz and Hughes, 2020) and achieve sustainability goals (Kougkoulos *et al*., 2021), which are essential to addressing grand challenges.

Theoretical background and development of hypotheses

Entrepreneurial orientation and stakeholder theory

The extent to which firms go beyond financial and strategic goals and diverge towards environmental and social considerations, we predict, will rely on EO and contingencies within and beyond the firm's boundaries affecting the organizing choices the firm makes. Stakeholder theory originated as a theory predicting organizational management choices (Donaldson and Preston, 1995) and strategy (Phillips, Freeman and Wicks, 2003). However, stakeholder theory has suffered from a plurality of theoretical approaches (Clarkson, 1991; Donaldson and Preston, 1995; Sternberg, 1996, 1997). Descriptive, instrumental and

[1] Phillips et al. (2003) are adamant that critiques of stakeholder theory stating that all stakeholders must be treated equally and highly under this theory (see Sternberg, 1997) are a crude exaggeration that never existed in the original thesis. A careful reading of stakeholder theory of the firm reveals that firms organize in ways that make choices about who is served and to what extent. Our theory accounts for this critical point.

normative lenses on this theory exist. The descriptive lens views stakeholder theory as an explanation for corporate characteristics and behaviours, framing stakeholder theory as a potential theory of the firm (Brenner and Cochran, 1991). The instrumental lens considers connections (or lack thereof) between stakeholder management and the achievement of (traditional) corporate objectives (i.e. financial ones) (Donaldson and Preston, 1995). The normative lens does not attempt prediction but merely interprets the corporation's function against moral guidelines (Carroll, 1989; Dodd, 1932). Combining these approaches is appropriate for a complete theory of a phenomenon (Donaldson and Preston, 1995). We predominately adopt the descriptive lens and use stakeholder theory to form our theoretical rationale for why firms organize to enable coordinated and collaborative effort (or not) (George *et al.*, 2016). We use the instrumental variant of stakeholder theory to predict the essential contingencies of this organizing to understand when a firm changes its behaviour to concentrate on (or give special privilege to) specific stakeholders (Jones, 1995; Jones, Harrison and Felps, 2018).

Revisiting the stakeholder theory of the firm, we argue that ubiquitous, unrelenting and unremitting environmental pressure compels the firm to organize in ways that respond to environmental and social challenges (and their stakeholders). When stakeholder theory was first conceived, the state of the world was one in which social and environmental considerations were desirable but optional. Stakeholder consideration (and by proxy social and environmental factors) is expected and increasingly mandatory for organizational legitimacy and the firm's wealth creation activities. The firm's existence relies in part on how it organizes to serve stakeholders. For this reason, we see the degree of EO as a strategic response to that pressure.

Firms will vary in their commitment to an EO. However, in emphasizing risk-taking, innovativeness and proactiveness, the firm orients towards an active, forward-looking search behaviour to address emerging market needs, trends and priorities with innovations that carry outcomes that are uncertain, not fully known, and not predictable (Hughes *et al.*, 2021a). EO is commercially focused (Gali *et al.*, 2020) and resource-hungry (Covin and Wales, 2019; Hughes *et al.*, 2015). Drawing on stakeholder theory describing how organizations operate (Brenner and Cochran, 1991), we predict that greater levels of EO will serve as an effective form of organizing in which the firm can best serve its stakeholders by increasing its environmental collaboration with its suppliers. Doing so has the added potential of offsetting the tendency to absorb resources for commercial activity while prompting environmental endeavours. Collaborating environmentally with its suppliers helps the entrepreneurially oriented firm meet its commercial and stakeholder goals. Therefore, we expect that the stronger its EO, the more the MNC will seek to collaborate environmentally with suppliers.

The proposed relationship between EO and environmental collaboration with stakeholders is complex, however. Contingencies affect the firm's context and the objectives it sets or what it sees as essential. Creating and attaining new objectives is especially relevant to understanding a firm's EO (Wales, 2016). Objectives and context also provide EO with its strategic intent (Covin and Wales, 2019). Stakeholder theory does not assume that a firm must privilege all stakeholders equally (Donaldson and Preston, 1995). Instead, the firm makes strategic choices about best serving stakeholders while recognizing the opportunity costs it faces (Phillips, Freeman and Wicks, 2003). The instrumental stakeholder variant predicts that some stakeholders (under given circumstances) are more powerful and important than others, becoming instrumental stakeholders that require the firm to reprioritize and privilege their interests above others. Drawing on stakeholder theory and its instrumental stakeholder variant (Donaldson and Preston, 1995; Jones, 1995; Jones, Harrison and Felps, 2018), we theorize that internal and external contingencies change which stakeholders receive the most attention and effort, thereby affecting the behaviour of the firm.

Using this theory, we predict that the extent to which EO drives environmental collaboration is affected by internal and external contingencies that affect organizing (work engagement) and a need to privilege particular stakeholders (market environment complexity). First, work engagement is indicative of an internal environment in which employees are deeply involved with, passionate about and enthused by their work. Social exchange is high, and employees will likely deploy innovative and entrepreneurial work behaviours (Hughes *et al.*, 2018). Work engagement implies that the firm is organized to support and empower employees. For example, firms implementing

employee-friendly policies typically attach high value to their reputational capital, increasing their commitment to treat employees fairly (Bae, Kang and Wang, 2011). Employees exhibiting high work engagement are committed to the firm and are deeply involved in its activities (Gutermann *et al*., 2017). High work engagement among employees suggests that their interests, as stakeholders, are served by the firm to initiate this level of effort (Kotter and Heskett, 1992). Low work engagement indicates a detached, disinterested workforce, and disinterested employees are unlikely to create much wealth for stakeholders (e.g. Donaldson and Preston, 1995; Kotter and Heskett, 1992). Consequently, we predict that high work engagement stimulates employees to leverage EO to pursue firm initiatives that better serve the firm's stakeholders – specifically through collaboration with suppliers as a route to service many stakeholder interests. Low work engagement would indicate a detached workforce unlikely to care about the firm's image or contribution to society. We see work engagement as the most critical internal contingency in a stakeholder theory for the relationship between EO and environmental collaboration with suppliers.

Second, a firm is influenced by its external market environment because more complexity, dynamism and hostility jeopardize firm survival and growth unless these conditions receive meticulous attention (Rueda-Manzanares, Arago´n-Correa and Sharma, 2008). Emerging markets are especially complex environments because competition and uncertainties facing MNCs are high (Wright *et al*., 2005). Moreover, adverse economic conditions in emerging markets generate more severe turbulence and barriers to successful competition (Shirokova *et al*., 2020). Drawing on the instrumental stakeholder variant of stakeholder theory, we predict that high market environment complexity will compel the firm to prioritize serving its single most instrumental stakeholder under this condition: its customer (Rahman, Aziz and Hughes, 2020). High market environment complexity heightens the firm's sensitivity to its competitive environment, affecting the focal point of its entrepreneurially oriented endeavours (Zahra and Garvis, 2000). A dominant focus on the customer is necessary for the customers' needs to be served over others (e.g. suppliers) owing to the acute competitiveness threats posed by high market environment complexity. Because market environment complexity pressurizes the firm to privilege its customers as a specific stakeholder, the resource hunger of EO generates an opportunity cost, reducing engagement with suppliers. Under acute pressure, the firm will then concentrate more on serving customers as its most instrumental stakeholder.

EO and environmental collaboration of MNCs in emerging markets

In a corporate setting (Hughes *et al*., 2021a), EO applies to the MNC as an organization-wide strategic posture and set of attributes that accentuate proactive, innovative and risk-taking behaviours (Wales, Covin and Monsen, 2020). In large corporations, entrepreneurial activities occur at and cut across multiple levels (Ireland, Covin and Kuratko, 2009; Zahra, 1993). Under a stakeholder theory, these behaviours should lead to new environmentally focused processes taking hold. The reasons are two-fold.

First, environmental collaboration with suppliers involves a great deal of uncertainty, especially in emerging markets, owing to the absence of governing mechanisms that guide environmental practices (Tatoglu *et al*., 2014). Environmental issues are acute in emerging markets, and the pressure to meet environmental sustainability goals is high. However, environmental challenges cannot be met through conventional business practice. Therefore, we expect the MNC to make novel organizational management and strategy choices around entrepreneurial behaviour to reduce environmental impact. For instance, in their empirical study, Brettel, Chomik and Flatten (2015) note that entrepreneurially oriented firms are more likely to engage with suppliers in allocating resources to enhance cleaner production. The essence of EO is to take risks, operate proactively and innovate. Entrepreneurially oriented MNCs are more likely to set up mechanisms to facilitate effective communication with other stakeholders and take joint actions against complex problems, including emerging environmental issues (Alghababsheh and Gallear, 2021).

Second, the entrepreneurially oriented MNC cannot solve multifaceted environmental challenges alone because of the resource-hungry character of EO. This resource hunger encourages network behaviour among firms (Hughes *et al*., 2015). Appreciating the emerging market pressures

on MNCs, MNCs will adjust the single-minded commercial focus of EO (Gali *et al*., 2020) to embrace environmental challenges in a positive light (Boso, Story and Cadogan, 2013). They will seek to coordinate collaborative effort entrepreneurially with their suppliers to coresolve environmental challenges. Environmental challenges are opportunities (not threats) to entrepreneurially oriented MNCs (Lumpkin, Brigham and Moss, 2010; Tang and Tang, 2018). When imbued with risk-tolerance, investment in innovativeness and a forward-looking emphasis, these MNCs should seek out collaborative arrangements (with suppliers) to solve complex environmental challenges.

H1: EO is positively related to the environmental collaboration of MNCs in emerging markets.

The moderating role of work engagement

We anticipate that employees will support firms' stakeholder-serving efforts when highly engaged in their work. An engaged employee is motivated, dedicated, engrossed and absorbed by their work, and strives for higher levels of workplace performance (Alfes *et al*., 2013; Gutermann *et al*., 2017; Salanova, Agut and Peiró, 2005) and organizational success (Schaufeli *et al*., 2002). Therefore, heavily engaged employees will value their work, their employer and their employer's interests, dedicating considerable time and effort to the organization and its initiatives. We expect that this will lead to a mindset that values the stakeholders of the business and supports servicing their interests. Disengaged employees are more likely to work with disinterest and little citizenship, reducing the likelihood of prioritizing initiatives aimed at other stakeholders.

Engaged employees accomplish their work-related tasks with less effort (Kahn, 1990), which allows them to allocate more resources to pursuing innovative initiatives (Ramamoorthy *et al*., 2005). These employees also tend to put discretionary effort into searching for new ways to improve business practices (Mustafa, Fiona and Hughes, 2018) and locate necessary support and resources to turn entrepreneurially driven ideas into practice (Sarasvathy, 2014). Engaged employees tend to hold positive attitudes towards change initiatives and provide additional support for their successful execution (Davis *et al*., 2019). However, organizations with low work engagement face resistance and detachment due to employees' low trust in management. Low trust is also a cause of reduced entrepreneurial behaviour and work performance among employees (Hughes *et al*., 2018). Therefore, we argue that higher work engagement substantially impacts the association between EO and environmental collaboration with suppliers by transforming and channelling the MNC's entrepreneurial strategic posture and attributes into concerted action.

H2: Work engagement positively moderates the link between EO and environmental collaboration in MNCs in emerging markets.

The moderating role of market environment complexity

Market environment complexity describes the number of elements in an organization's external environment and their connections (Newkirk, Lederer and Srinivasan, 2003). Many elements in a highly complex environment (e.g. diversity in products/services, customer purchasing habits and competition) can affect the organization's strategies and behaviours (Rueda-Manzanares, Arago´n-Correa and Sharma, 2008). Market environment complexity is typical in emerging markets (Boso, Story and Cadogan, 2013; Wright *et al*., 2005), and higher market environment complexity is associated with unpredictable market-based outcomes, rising uncertainty, and severe competitive threats (Lee *et al*., 2019) capable of reshaping entrepreneurial endeavours (Kreiser *et al*., 2020). Within this setting, MNCs possessing EO are more likely to redirect their entrepreneurial efforts towards the most instrumental stakeholder: the customer. Firms with more EO are able to change the course of their strategies, operations, and behaviours more frequently and more effectively than those that have lower EO (Hughes *et al*., 2021a). From stakeholder theory and its instrumental variant, an impetus to change the focal point of entrepreneurial endeavours comes from acute pressures on serving instrumental stakeholders. Acute environmental complexity is commensurate with a high pressure to select the customer as the instrumental stakeholder and serve their needs and interests first and foremost. This redeployment would be expected to privilege a market focus that places the customer first, aiming to serve

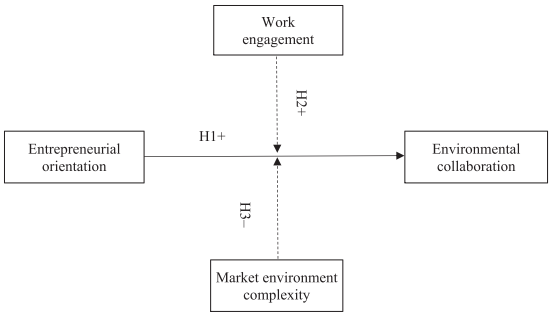

Figure 1. Conceptual model

their needs fully, and redirects entrepreneurial efforts away from other stakeholders, privileging customers and competition over environmental collaboration with suppliers.

From an instrumental stakeholder perspective, complex market environments are characterized by considerable diversity in customer buying habits and competition, and by product and service lines that focus on the customer as the instrumental, the most crucial, stakeholder to service. Organizations operating in emerging markets must also contend with imperfect institutions, potentially requiring more of a firm's EO (Mair, Martí and Ventresca, 2012) to adjust their entrepreneurial behaviours and their processes and resources to quickly and effectively address market challenges (Bruton *et al*., 2013; Dai *et al*., 2014). Firms, irrespective of size and exacerbated by the resource hunger of EO, do not have infinite resources (or infinite attention) to service all stakeholders. Nor should a firm attempt to do so (Phillips, Freeman and Wicks, 2003). Failing to service the customer as the critical instrumental stakeholder under the circumstances of high market environment complexity puts the financial and market performance of the MNC at risk (Rahman, Aziz and Hughes, 2020).

Under these circumstances, we predict a negative moderating effect of greater market environment complexity on the relationship between EO and environmental collaboration with suppliers.

H3: Market environment complexity negatively moderates the link between EO and environmental collaboration of MNCs in emerging markets.

Figure 1 presents our conceptual model.

Research methods

Research context

Turkey represents an appropriate context for our study. First, being a member of the G20, Turkey is one of the leading economies in southeastern Europe and the Middle East. After the 2001 economic crisis, Turkey underwent significant economic reforms, including in its banking and financial system. It adopted a floating exchange regime, which helped it to become one of the largest foreign direct investment (FDI) receivers in its region. Second, the Turkish business environment is vibrant, with firms required to be proactive and innovative to sustain their competitiveness (Arda, Bayraktar and Tatoglu, 2019; Tatoglu *et al*., 2014). Third, the Turkish government introduced regulations and policies to pressure companies to adopt more environmentally sustainable practices (Cakar and Alakavuklar, 2014; Tatoglu *et al*., 2020). MNCs in Turkey face increasing pressure from government, organizations and citizens to enhance and sustain their environmental footprints. To react to this competitive and social landscape, MNCs increasingly adopt environmental, social and governance (ESG) objectives in addition to a focus on financial returns. These circumstances make MNCs operating in the emerging Turkish economy an appropriate setting for an investigation into the association between EO and environmental collaboration with suppliers geared towards environmental sustainability.

Sample and data collection

We sought multisource, multi-level data. We obtained a list of MNCs in Turkey from the Ministry of Industry and Technology's FDI database. This database comprised 65,533 FDI firms as of 2018. After excluding firms with a capital size smaller than 10 million USD and less than 10% of foreign equity shareholding, our sampling frame consisted of 2345 FDI firms. Then, we randomly selected 500 MNCs and requested their participation in our study. Following Dillman (2007), we identified potential participants at the chosen firms based on their expertise and knowledge of strategic and operational tasks. The use of multiple potential participants raises the veracity and validity of responses.

Table 3. Characteristics of respondents and responding MNCs

Characteristics of respondents (N = 249)		Number	%
Managerial level	Top level (CEO, chairman, and board member)	65	26
	Medium level (director/head of department)	118	48
	Lower level (first-line manager and supervisor)	66	26
Education level	High school	18	7
	Some college	27	11
	Bachelor's degree	124	50
	Postgraduate degree	80	32
Work experience	Less than 4 years	54	22
	4–9 years	78	31
	10–15 years	52	21
	More than 15 years	65	26
Industry sector	Industrial, automotive, and machinery equipment	46	18
	Textiles and apparel	20	8
	Consumer electronics and appliances	22	9
	Forestry products and paper	29	12
	Food and beverage	25	10
	Other manufacturing	23	9
	Healthcare services	32	13
	Transportation and logistics	19	8
	Financial services	16	6
	Hospitality and tourism	17	7
Number of employees	Fewer than 250	64	25
	250–500	57	23
	501–1000	52	21
	1001–5000	39	16
	More than 5000	37	15
Characteristics of MNCs (N = 66)		**Number**	**%**
Industry sector	Industrial, automotive, and machinery equipment	11	16
	Textiles and apparel	6	10
	Consumer electronics and appliances	7	11
	Forestry products and paper	8	12
	Food and beverage	6	10
	Other manufacturing	5	7
	Healthcare services	8	12
	Transportation and logistics	6	10
	Financial services	4	5
	Hospitality and tourism	5	7
Number of employees	Fewer than 250	16	24
	250–500	15	23
	501–1000	14	22
	1001–5000	10	15
	More than 5000	11	16

Abbreviations: MNCs, multinational companies; CEO, Chief Executive Officer.

We used the back-translation (English–Turkish) procedure to administer the questionnaire (Brislin, 1986), verified by two bilingual scholars. We mailed 1800 questionnaires (to 2–5 responding managers in each firm), requesting that survey respondents possessed a holistic view of organizational processes and their outcomes and a high degree of operational expertise. After two rounds of data collection, we received 257 responses from 66 MNCs, of which 249 were usable. Our response rate of 13.8% is comparable to that of other studies in similar settings (Kriauciunas, Parmigiani and Rivera-Santos, 2011). Table 3 details the key features of the participants and their affiliated MNCs.

We examined for non-response bias by comparing the responses of early and late participants. The results show no significant difference ($P > 0.1$). We further compared a sample of randomly selected 50 non-participants with the total number of participants based on

firm characteristics (industry sector, employee number and annual turnover). These results did not indicate any significant variation between participating and non-participating respondents. Therefore, there was no evidence of non-response bias in the final sample.

Measurement of variables

We used perceptual measures to capture firms' behaviours, environmental processes, and individuals' capabilities (Singh, Darwish and Potočnik, 2016). All measures used five-point Likert scales (1 = 'strongly disagree' to 5 = 'strongly agree').

Firm-level variables. *EO* was measured using nine items drawn from Wiklund (1998) and Naman and Slevin (1993). Managers were asked to evaluate the MNC's proactiveness, risk-taking and innovativeness using these items. We later removed two items owing to low factor loading. While scholars gravitate towards the Covin and Slevin (1989) or Hughes and Morgan (2007) measurement systems (Covin and Wales, 2012), these are not always the best to use. The Wiklund (1998) and Naman and Slevin (1993) items are advantageous because they originate from a study dedicated to a contingency view of EO expressly accounting for changes facing the firm. For example, these items speak to implementing progressive and innovative processes and practices, observing best practices in their sector and beyond, searching for new practices, early recognition of technological changes that may influence the organization, and preferring bold action. The content of these items has greater face validity with the substance of our research. Our items are broadly consistent with one of the few studies on corporate EO (Hughes *et al*., 2021a).

Environmental collaboration assesses the extent to which firms collaborate with suppliers to improve and meet environmental targets. We used Vachon and Klassen's (2006) six-item instrument to measure environmental collaboration. We removed two items owing to low factor loading.

We measured *market environment complexity* using three items from Newkirk, Lederer and Srinivasan (2003) and Chen *et al*. (2014). This construct measures how managers perceive the extent of complexity in their market environment (i.e. diversity of consumer purchasing habits, competition and product line). This is a valid, pre-existing, established and often-used measure of environmental complexity (e.g. Chen *et al*., 2014; Wade and Hulland, 2004). However, consistent with Heggestad *et al*. (2019), we change the name of the construct from 'environmental complexity' to 'market environment complexity' to reflect its items better and achieve greater construct clarity.

Individual-level variable. For *work engagement*, we used eight items developed by Rothbard (2001) to assess individuals' attention to work and absorption by work. Two items were removed owing to low factor loadings.

Control variables. We used *industry sector*, *firm size, managerial level, work experience* and *managers' educational level* as control variables (Schweisfurth and Raasch, 2018). These variables can influence entrepreneurial behaviour and its associated impact (Keil, Maula and Syrigos, 2017; Lechner and Gudmundsson, 2014).

Analysis method

We utilized MLwiN software (Rasbash *et al*., 2009) to conduct multi-level analysis, since our data structure is at multiple levels (i.e. individual and firm levels). A multi-level analysis is instrumental in controlling for any possible nesting effects of individual-level and firm-level factors on the tested relationships (Aguinis and Molina-Azorín, 2015). Following best-practice recommendations on a multi-level modelling approach (Kim, Liu and Diefendorff, 2015; Quigley *et al*., 2007), we used grand-mean-centred estimates for all Level 1 variables. For Level 2 variables, we used an average score for each firm.

To check the appropriateness of multi-level analysis, we compared an individual-level model with a model of individuals nested in firms. The difference in log-likelihood between models is significant ($557.4-518.2 = 40.2$; $p < .01$). We found that 13.8% of the total variance was accounted for by firm-level variance. Any value above 10% suggests the viability of using a multi-level analysis method (Klein, Tosi and Cannella Jr, 1999). Therefore, there is sufficient justification for adopting a multi-level analysis.

We followed the procedure recommended by previous research on multi-level modelling to test for moderation effects (Bauer, Preacher and Gil, 2006; Rofcanin *et al*., 2019). We plotted simple slopes at one standard deviation below and

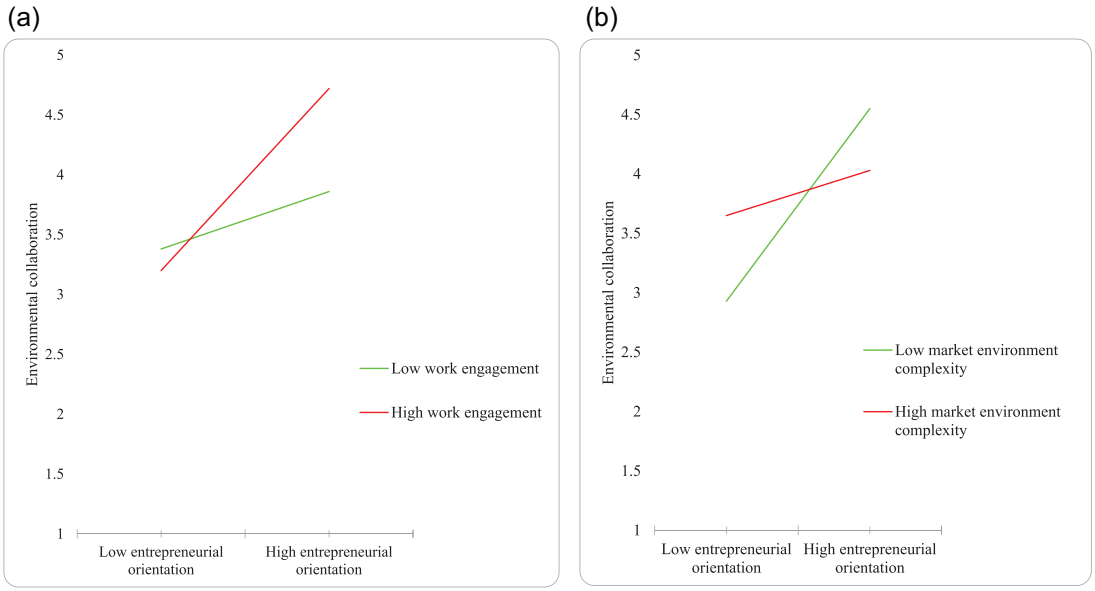

Figure 2. (a) Interaction of work engagement with entrepreneurial orientation on environmental collaboration. (b) Interaction of market environment complexity with entrepreneurial orientation on environmental collaboration [Colour figure can be viewed at wileyonlinelibrary.com]

above the mean of the moderator. These simple slope analyses of the moderating effects of work engagement and market environment complexity on the relationship between EO and environmental collaboration are plotted in Figures 2(a) and 2(b), respectively. We regressed the slope estimates for Level 2 (firm level) and Level 1 (individual level) to test this interaction.

Results

Confirmatory factor analysis

Table 4 reports the results of confirmatory factor analysis (CFA). The results indicate an acceptable level of fit to the data [χ^2/df =2.55, $p < .01$; IFI = .90; CFI = .91; TLI = 0.89; RMSEA = .06].

We also checked our model's convergent validity using average variance extracted (AVE) measures. Table 5 shows that all AVE values are greater than .40. Although some of our AVE values are less than the recommended threshold of .50, Fornell and Larcker (1981) suggest that if AVE is less than .50 but composite reliability (CR) is higher than .60 (in Table 4, all the CR values are above .7), the convergent validity of a construct is still satisfactory (Fornell and Larcker, 1981).

Following Fornell and Larcker (1981), we analysed discriminant validity by comparing AVE values with shared variances (squared correlations). The results in Table 5 show that, for all constructs, the AVE values are greater than the shared variances, indicating discriminant validity.

Common method bias and endogeneity

We reduced and checked for the possibility of common method bias (CMB) by employing several methodological and statistical techniques. To check for potential endogeneity, we used the instrumental variable technique.

As ex ante methodological techniques, we pre-screened participants with a high level of knowledge and understanding of the research subject. We informed all potential participants about the anonymity and confidentiality of their responses at all stages of the research. Second, we collected multiple responses within each firm (e.g. we distributed 2 to 5 surveys in each firm) because using multiple informants enhances the validity and consistency of responses (Craighead *et al.*, 2011). This is also an effective survey administration remedy against single-informant bias. To ensure that there was no duplication of responses when we mailed multiple surveys (to 2 to 5 respondents in each firm), we requested that each participant respond to one survey only

Table 4. Confirmatory factor analysis results

Constructs/items	Standardized loadings[a]	CR[b]
Entrepreneurial orientation		**.86**
The management of our organization supports the projects that are associated with risks and expectations for returns higher than average.	.75	
We actively observe and adopt the best practices in our sector.	.61	
We actively observe the new practices developed in other sectors and exploit them in our own business.	.72	
We recognize early on such technological changes that may have an effect on our organization.	.60	
We are able to take on unexpected opportunities.	.73	
We search for new practices all the time.	.74	
In uncertain decision-making situations, we prefer bold actions to make sure that possibilities are exploited.	.62	
Work engagement		**.88**
I spend a lot of time thinking about my work.	.76	
I focus a great deal of attention on my work.	.81	
I concentrate a lot on my work.	.73	
When I am working, I often lose track of time.	.60	
When I am working, I am completely engrossed in my work.	.80	
When I am working, I am totally absorbed by it.	.83	
Market environment complexity		**.74**
In our external environment, there is considerable diversity in customer buying habits.	.74	
In our external environment, there is considerable diversity in the nature of competition.	.67	
In our external environment, there is considerable diversity in product/service lines.	.70	
Environmental collaboration		**.74**
Our organization encourages its suppliers to develop new source reduction strategies.	.63	
Our organization cooperates with its suppliers to improve their waste reduction initiatives.	.64	
Our organization works with its suppliers for cleaner production.	.70	
Our organization collaborates with its suppliers to acquire materials, parts, and/or services that support its environmental goals.	.60	

[a] All loadings are significant at $p < .01$
[b] CR = Composite reliability
Abbreviations: CR, composite reliability.

and that each survey was returned in a separate sealed envelope with the participant's business card attached. These steps ensured that there was no duplication in the responses. In addition, gathering data from several respondents enabled us to ascertain any dissimilarities in identifying a firm's entrepreneurial behaviour and its potential consequences. Third, we piloted questionnaire items with five executives from three firms in Turkey to ensure the clarity and consistency of the questions. Based on their feedback and comments, we revised the questionnaire structure and adapted some items to fit our research setting better. Thus, we optimized the clarity, accuracy and consistency of our survey questionnaire and reduced the social incentives that could give rise to CMB.

As ex post statistical methods, we first ran Harman's single-factor test to check whether a single factor would explicate most of the variance (Podsakoff *et al*., 2003). To do so, we constrained all items to a single factor. The results indicated that the single factor did not account for most of the variance in the items. Then, we followed Podaskoff et al.'s (2012) and Lindell and Whitney's (2001) procedure for a marker variable test. Consistent with previous research (e.g. Bal *et al*., 2012; Rofcanin *et al*., 2018; Williams and Lee, 2011), we conducted correlational marker variable

Table 5. Convergent and discriminant validity of the measurement model[a]

Constructs	No of items	AVE[b]	1	2	3	4
1. Entrepreneurial orientation	7	.47	.67			
2. Work engagement	6	.57	.15	.75		
3. Market environment complexity	3	.50	.03	.04	.70	
4. Environmental collaboration	4	.41	.21	.06	.04	.61

[a] Italicized values on the diagonal are the square root of the AVE values.
[b] Average variance extracted.
Abbreviations: AVE, average variance extracted.

analysis (Lindell and Whitney, 2001). We first identified firm age as the marker variable, as there is no theoretical link between firm age and the substantive variables of this study. We identified the lowest correlation between the marker variable and substantive variables (.02 between EO and firm age). We subtracted this value from each zero-order correlation. Each value was then divided by one minus this estimate. The results suggest that the absolute differences were minimal in our sample, ranging between .01 and .005. Therefore, we conclude that CMB is not a concern in our study.

We conducted a two-stage least-squares (2SLS) estimation with an instrumental variable to check for potential endogeneity (Anderson *et al.*, 2020; Riviere and Romero-Martinez, 2021). We used explicit knowledge as an instrumental variable for two reasons. Defined as the ability of individuals to acquire explicit knowledge of the firm's procedures and practices and of market dynamics that can influence job and organizational outcomes (Nonaka, 1994), explicit knowledge is essential to EO as it provides competitor to enable proactive and innovative actions to be taken (Li, Huang and Tsai, 2009). Second, explicit knowledge (instrumental variable) is correlated with EO (explanatory variable) but not with environmental collaboration, the dependent variable, which suggests that it is a valid instrument for our research setting (Ullah, Zaefarian and Ullah, 2021). For 2SLS, we regressed EO on controls and the instrumental variable (i.e. explicit knowledge), then used the predicted value of this regression in our hypothesized model. The results for the first stage suggest that the instrument has a significant and positive effect on the explanatory variable ($\beta = .28$, SE = .07, t = 4.00). The results for the second stage show that after controlling for endogeneity, EO still has a positive and significant effect on environmental collaboration ($\beta = 1.80$, SE = .49, t = 3.67). Endogeneity is not of concern.

Testing of hypotheses

We report the descriptive statistics, correlation coefficients and reliability estimates in Table 6. We checked variance inflation factors (VIFs) and tolerance values for any potential multicollinearity issues. We note that all VIF values range between 1.07 and 1.10 and that tolerance values range between .90 and .93, indicating that multicollinearity is not a concern.

The results of the multi-level analysis are shown in Table 7. Model 1 consists of only control variables. Model 2 contains EO and indicates its direct effect on environmental collaboration. Model 3 includes EO, the moderating variables (work engagement and market environment complexity), and the interaction terms.

Model 1 reveals that none of the control variables has a significant impact on environmental collaboration. Model 2 in Table 7 strongly supports Hypothesis 1, in that EO positively impacts environmental collaboration ($\beta = .51$, $p < .01$). As Model 3 in Table 7 shows, the moderating role of work engagement is positive and significant ($\beta = .27$, $p < .01$), which supports Hypothesis 2, indicating that the higher the degree of work engagement, the stronger the association between EO and environmental collaboration.

In Model 3, the moderating effect of market environment complexity on the link between MNCs' EO in emerging markets and environmental collaboration is negative and significant ($\beta = -.32$, $p < .01$), supporting Hypothesis 3. In highly complex market environments, entrepreneurially oriented firms collaborate less with suppliers concerning environmental objectives.

To illustrate the moderating effects of work engagement and market environment complexity, we plotted the relationship between EO and environmental collaboration at different levels of these moderators. Figure 2(a) shows that EO has a

Table 6. Means, standard deviations, and correlations among variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9
1. Industry sector	12.31	5.60	1								
2. Firm size	2.75	1.37	−.047	1							
3. Work experience	3.39	1.19	.071	.049	1						
4. Educational level	3.25	.95	.181*	−.036	−.039	1					
5. Managerial level	2.02	.73	−.113	.287*	−.353*	−.124	1				
6. Entrepreneurial orientation	3.81	.63	.015	−.010	−.016	−.124	−.085	1			
7. Work engagement	4.04	.59	−.042	−.176*	.077	−.086	−.224*	.397*	1		
8. Market environment complexity	3.97	.70	.009	−.042	−.043	−.022	.003	.170*	.213*	1	
9. Environmental collaboration	3.82	.71	−.087	.001	−.068	−.001	.027	.460*	.253*	.205*	1

N = 249 managers nested in 66 MNCs.
*p < .01.
Abbreviations: S.D., standard deviation; MNCs, multinational companies.

Table 7. Results of multi-level analysis: environmental collaboration

	Model 1			Model 2			Model 3		
	β	SE	t-value	β	SE	t-value	β	SE	t-value
Intercept	4.09**	.31	13.19	4.19**	.30	13.96	4.04**	.30	13.46
Industry	−.01	.01	−1.00	−.02	.00	.00	−.01	.00	.00
Firm size	.00	.03	.00	−.02	.02	−1.00	−.03	.03	−1.00
Work experience	−.03	.04	−.75	−.02	.04	−.50	−.03	.04	−.75
Educational level	−.00	.04	.00	−.01	.04	−.25	.00	.04	.00
Managerial level	−.01	.07	−.14	.05	.07	.71	.10	.08	1.25
Direct effect									
Entrepreneurial orientation				.51**	.07	7.28	.50**	.07	7.14
Moderation effects									
Work engagement							.22*	.08	2.75
Entrepreneurial orientation × Work engagement							.27**	.09	3.00
Market environment complexity							.05	.06	.83
Entrepreneurial orientation × Market environment complexity							−.32**	.10	−3.20
Level 1 intercept variance (SE)	.05	.03		.06	.03		.07	.03	
Level 2 intercept variance (SE)	.38	.04		.38	.03		.37	.03	

N = 249 managers nested in 66 MNCs.
*p < .05,
**p < .01.
Abbreviations: β, Beta; SE, standard error; MNCs, multinational companies.

greater influence on environmental collaboration when there is a high level of work engagement. Figure 2(b) indicates that the effect of EO is stronger when market environment complexity is low.

Discussion and conclusion

MNCs are at the forefront of competitive and social pressures to operate sustainably and embrace environmental policies. MNCs transcend national boundaries in ways that cause them to incur a range of sustainability issues in their host countries. However, despite intense pressures, many MNCs still do not respond with the intensity befitting the very public pressure and scrutiny to which they are subjected (Akhtar *et al.*, 2018; Bouguerra *et al.*, 2021; Demirbag *et al.*, 2017). We have enriched the sustainability debate by revealing the role of EO and important omitted contingency factors (work engagement and market environment complexity) to understand when and to what degree MNCs in emerging economies collaborate with suppliers to work on environmental objectives.

First, our results show that MNCs' EO in emerging markets is positively related to environmental

collaboration with suppliers. Extant research finds that EO helps firms to improve various dimensions of firm performance, such as operational efficiency, innovation, learning and financial performance (Engelen *et al*., 2015; Hughes *et al*., 2021a; Wales, 2016). However, the dominance of financial outcomes as the ultimate dependent variable in EO has stagnated inquiry and theoretical development about its broader effects, especially sustainability (Gali *et al*., 2020) and stakeholders (Hughes *et al*., 2021b). Unprecedented scrutiny on MNC activities means that a purely commercial focus alone becomes increasingly untenable. An instance of this scrutiny is the functioning of global value chains and MNCs' relationships with their suppliers (Golgeci *et al*., 2019). For example, Clarke and Boersma (2017) question why many of the largest, financially successful MNCs have failed to resolve human rights and environmental issues and ethical dilemmas in their suppliers' operations. There is no shortage of social concerns and institutional pressures on MNCs to collaborate with suppliers to reduce their environmental impact. We provide nuanced insights into this debate, showing that MNCs in emerging markets require an innovative, risk-tolerant and proactive strategic posture (an entrepreneurial orientation) as fuel for increasing collaborative processes geared towards environmental sustainability. When an EO is embedded as the MNC's strategic posture, organizational attributes commensurate with entrepreneurship form and serve as an organizing principle promoting environmental collaboration with suppliers.

Second, our results reveal the complexity of the challenges facing MNCs operating in emerging economies in distributing resources and attention to environmentally focused collaborative efforts with suppliers. While MNCs face strong calls for environmental sustainability and pressures to innovate pro-environment initiatives (Rahman, Aziz and Hughes, 2020), they are buffeted by various additional pressures and demands. Stakeholder theory acknowledges that organizations cannot service all stakeholders (Phillips, Freeman and Wicks, 2003), and nor should they. For instance, Donaldson and Preston (1995) argue that stakeholders are persons or groups with legitimate interests in substantive aspects of corporate activity and are identified by their interests in the corporation, 'whether the corporation has any corresponding functional interest in them' (p. 67). However, stakeholders are differently privileged, and 'there is no prima facie priority of one set of interests and benefits over another' (p. 68). Unquestionably, Donaldson and Preston (1995) suggest that contingencies must (re)shape which stakeholders are more or less important at any given time, given a set of circumstances. We reveal that the linkage between EO and environmental collaboration with suppliers is contingent, being positively and negatively moderated by work engagement and the degree of market environment complexity, respectively. These findings reveal new boundary conditions to our understanding of EO and its contribution to environmental collaboration with suppliers.

Prior work on stakeholder engagement suggests that employees who are engaged in their work are enthusiastic, effortful and committed (Gutermann *et al*., 2017; Salanova, Agut and Peiró, 2005), dedicate more time and effort to supporting organizational initiatives (Davis *et al*., 2019), and are steadfastly emotionally engaged (Petrou, Demerouti and Schaufeli, 2018). We add a stakeholder-serving dimension to work engagement. We show that engaged employees apply this same commitment, care and effort to the firm's relationships, increasing the extent to which the entrepreneurial firm collaborates with its suppliers on environmental issues. Conversely, we reveal a dark side to market environment complexity. Entrepreneurial firms create, define, discover and exploit opportunities to remain competitively relevant. Higher levels of market environment complexity compel the firm to refocus on the customer as its most crucial stakeholder (Rahman, Aziz and Hughes, 2020) because of the threat this complexity poses for competitive relevance. We suggest that market environment complexity channels the underlying commercial focus of EO, redistributing attention and resources away from supplier collaboration and towards commercial objectives. Prior research suggests that higher market environment complexity is associated with unpredictable market-based outcomes, rising uncertainty and severe competitive threats (Boso, Story and Cadogan, 2013; Lee *et al*., 2019) capable of reshaping entrepreneurial endeavours (Kreiser *et al*., 2020). Our findings reveal a more subtle layer to and consequence of this complexity: greater market environmental complexity causes the MNC to reprioritize its stakeholders. We find this is at a cost to collaborative environmental initiatives with its suppliers.

Theoretical contributions

Our study provides three theoretical contributions. First, despite the importance of EO for large MNCs (Chen *et al*., 2020; Hughes *et al*., 2021a), mixed findings reveal an absence of theory to accurately predict whether and why an EO may benefit environmental collaboration efforts. Studies routinely focus on a relationship between EO and environmental or social performance. However, such a relationship is long-linked, illustrated by studies reporting mixed findings on the relationship between EO and environmental or social performance, (Karmann *et al*., 2016; Chavez *et al*., 2020; Gali *et al*., 2020; Shafique, Kalyar and Mehwish, 2021), and neglecting environmental collaboration as a known driver of environmental performance. Grounded in stakeholder theory, we reasoned that the more entrepreneurially oriented an MNC is, the more it will see environmental challenges as opportunities rather than threats (Lumpkin, Brigham and Moss, 2010; Tang and Tang, 2018). However, the resource consumption rate of EO (for commercial purposes) means that these MNCs cannot solve multiplex environmental challenges in isolation. We predicted that these MNCs would then seek environmental collaboration with suppliers and coordinate collaborative effort entrepreneurially with their suppliers to resolve environmental challenges. We validated this claim. Using both descriptive and instrumental lenses of the stakeholder theory of the firm, we contributed a theoretical model and logic that accurately predicts the extent to which MNC EO shapes environmentally oriented behaviour (environmental collaboration with suppliers). Our theory and model provide the essential missing link in the long-linked relationship between EO and environmental performance.

For our second contribution, we enriched the stakeholder theory of EO by accounting for two new boundary conditions frequently omitted in stakeholder treatments that vary the relationship between EO and environmental collaboration. We integrated work engagement (an internal contingency) and market environment complexity (an external contingency) as positive and negative moderators of this relationship. These boundary conditions draw attention to the role of internal and external contingencies in resetting or recalibrating stakeholder salience and thereby to how they govern the application of the firm's EO. These contingencies are essential to a complete stakeholder theory of EO. First, by its very nature, EO is commercially oriented (Gali *et al*., 2020) but holds the potential to see environmental challenges as attractive opportunities (Tang and Tang, 2018; Lumpkin, Brigham and Moss, 2010). Work engagement means that the MNC has successfully enthused employees about their work (Gutermann *et al*., 2017; Salanova, Agut and Peiró, 2005) and treats employees well (Bae, Kang and Wang, 2011). Low work engagement indicates a detached, disinterested workforce unlikely to create benefits for other stakeholders (e.g. Donaldson and Preston, 1995; Kotter and Heskett, 1992). Employees distant hierarchically from senior managers lose sight of the firm's strategy and goals (Gibson *et al*., 2019). Work engagement mitigates this problem and enables employees to enact the behaviours set in place by EO to support environmental collaboration. This new internal boundary condition enriches a stakeholder theory of EO, and the absence of work engagement explains why some firms fail to gain as much as others from their EO (Hughes *et al*., 2021b).

We have provided a theory that shows how market environment complexity negatively moderates the relationship between the EO of MNCs in an emerging market and their environmental collaboration with suppliers. We revealed the usefulness of the instrumental stakeholder variant of stakeholder theory (Jones, 1995; Jones, Harrison and Felps, 2018; Rahman, Aziz and Hughes, 2020). We revealed that high market environment complexity compels the MNC to privilege its customers first and foremost. Because the resources available to EO endeavours are finite, and because market environment complexity creates an urgency to service the customer as the most critical (instrumental) stakeholder, the salience of suppliers and environmental objectives as stakeholders are deprioritized as the customer (as the instrumental stakeholder) is (re)prioritized. That a body of studies (e.g. Boso, Cadogan and Story, 2012; Slevin and Covin, 1997; Martin and Javalgi, 2016) reports a positive moderating effect by market environment complexity on the link between EO and *financial* performance suggests that these external conditions drive the focus of EO onto profit maximization. We now surmise that it does so at a cost to environmental collaboration. The traditional overemphasis on financial performance in the EO literature has come at a cost to understanding the limits of its

contribution to environmental practices. Our two new boundary conditions accurately predict a shift in stakeholder emphasis that increases (for work engagement) and decreases (for market environment complexity) the extent to which entrepreneurially oriented MNCs work with suppliers on environmental issues.

As our third contribution, we have provided a test and empirical evidence that supports the predictive validity of our stakeholder theory of EO and its effects on environmental collaboration with suppliers. Our empirical evidence affirms that EO positively affects MNCs' cooperation with suppliers to reduce their environmental footprint in an emerging market. This effect varies substantially based on work engagement and market environment complexity. This evidence highlights the usefulness of a stakeholder theory of the firm for providing a fuller treatment of a phenomenon. We adopted the descriptive lens of stakeholder theory (George *et al.*, 2016) to form our theoretical rationale for why firms organize through EO to enable coordinated and collaborative effort when faced with grand environmental challenges. We used instrumental stakeholder logic (Jones, 1995; Jones, Harrison and Felps, 2018) to predict the essential contingencies of this organizing to understand when a firm changes its behaviour to prioritize specific stakeholders. Our findings provide new insights into EO's multi-level and bounded nature for accurately predicting environmental collaboration among MNCs in emerging markets through stakeholder theory.

Managerial implications

EO can help MNCs operating in emerging markets to achieve more environmental collaboration with suppliers. This is essential for successfully managing intense pressures from governments and other stakeholders to prioritize sustainable supply chains, innovate pro-environment initiatives, achieve sustainability goals and support the sustainability of their suppliers to address grand challenges. Managers can use the measurement items to evaluate their firms' current EO levels and determine their actions to further their environmental collaboration with suppliers in emerging markets. We advise managers to carefully evaluate employees' work engagement, as its absence constrains the efforts set by an entrepreneurial strategic posture to achieve increases in environmental collaboration. That one organization cannot resolve multifaceted challenges presented by environmental sustainability highlights the importance of correctly organizing the firm to enable environmental collaboration with suppliers. Improving environmental processes from EO requires employees to be more engaged and committed in their work.

MNC managers should bear in mind that the contribution of EO to environmental collaboration with suppliers is greater when the firm operates in emerging markets characterized by lower market environment complexity. The issue here is stakeholder salience: higher market environment complexity steers managerial attention towards the customer as the most vital stakeholder. This is necessarily so for the firm's competitiveness. The resources available to entrepreneurially oriented endeavours are finite, and high market environment complexity privileges the customer as the recipient of those endeavours, reducing the focus on environmental collaboration with suppliers as a result. Conscious awareness of this process may allow MNC managers to take supplementary decisions that favour environmental objectives so that prior gains are not lost.

Limitations and future research

Our findings and limitations provide directions for future research. First, we developed and tested a theoretical model based on data obtained from MNCs operating in a single emerging country market. This constrains the generalizability of our findings to MNCs operating in other emerging country markets, despite the similarities Turkey has to other economies. Future research should test our theory in other country settings, including emerging and developed country markets. Second, we used perceptual measures and self-reported data from managers. Future research could seek objective and archival data to measure EO and its outcomes, where such data are available. However, objective proxies of EO are not yet validated against long-standing, well-established and validated subjective measures. Third, we used two moderators in our study: internal (work engagement) and external (market environment complexity). Future research could incorporate additional contingencies and boundary conditions that might shape the relationship between EO and environmental collaboration, such as employee diversity or the use of cross-functional teams.

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