



2 **Reporting of environmental policies**
3 **and internationalization of Asia–Pacific firms:**
4 **the moderating role of innovation as a source of legitimacy**

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7 Received: 4 May 2021 / Revised: 26 July 2022 / Accepted: 4 August 2022
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9 **Abstract**

10 This research aims to examine whether Asia–Pacific firms use reporting environ-
11 mental policies to reduce their liability of origin in the international arena. Further-
12 more, moderating effects of institutional and organizational innovations are cap-
13 tured as sources of legitimacy. A multilevel modeling technique was used to test the
14 hypotheses. The sample was composed of 91 firms from 11 countries in 10 different
15 sectors during the period from 2014 to 2018. Using institutional theory, the results
16 show that the reporting of environmental policies has a significant positive impact
17 on the firms’ scope of internationalization. The results reveal that high institutional
18 innovation has a negative moderating role in the relationship between firms’ report-
19 ing of environmental policies and their scope of internationalization. However, it
20 was found that organizational innovation does not exhibit a significant moderating
21 effect on this relationship.

22 **Keywords** Reporting of environmental policies · Internationalization · Institutional
23 theory · Liability of origin · Innovation · Legitimacy · Asia–Pacific firms

24 **Introduction**

25 The Asia–Pacific region has witnessed unprecedented growth in international trade **AQ1**
26 (Eddleston et al., 2020; Legatum Institute, 2018). This region is widely consid-
27 ered to be a key leader in world economic progress (Lee & Heshmati, 2009). As

A1 In order to preserve anonymity, we do not include this acknowledgement section in the blinded
A2 manuscript. Should this manuscript be accepted for final publication, this section will be included in
A3 the final version.

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28 the leading economies of this region, these conditions provide a stimulus for export
29 acceleration, consumer incrementation, and powerful economic zones (World Eco-
30 nomic Forum (WEF), 2018). Asia–Pacific firms internationalize, not only inside this
31 region, but also toward the United States and Western Europe, with the principal
32 challenge of developing great and ambitious strategies to take advantage of new for-
33 eign markets and technologies (Srivastava et al., 2015). Previous research focused
34 on this region has studied how the internationalization of firms has been influenced
35 by factors such as ownership structures (Purkayastha et al., 2017), network strategies
36 (Udomkit, 2017), or linking capacity (Du & Zhou, 2019). However, the environmen-
37 tal proactivity of firms in the Asia–Pacific region has not been sufficiently addressed
38 by scholars (Zhu et al., 2012).

39 In studying how environmental reporting affects the internationalization process,
40 a sample of 91 firms from 11 Asia–Pacific countries distributed across ten different
41 sectors was analyzed. This relationship is important in countries with fast-growing
42 economies and a high level of industrialization. This has become even more rel-
43 evant given the increasing presence of Asia–Pacific firms in foreign developing and
44 developed markets. These international firms can contribute to creating highly rel-
45 evant cooperation agreements aligned with Sustainable Development Goals (SDGs).
46 These companies were born in an environment with a differentiated institutional
47 profiles, marked by a lower level of demands in environmental regulations and other
48 strategic priorities in terms of sustainability. Although these companies are from
49 countries that are rich in natural resources, they are highly dependent on fresh water,
50 fisheries, forests, agricultural lands, and healthy soils to sustain their socioeconomic
51 development (Cardascia et al., 2020). According to the United Nations’ International
52 Resource Panel, this region dominates the global use of resources and, in 2015, rep-
53 resented 63% of the world’s material use. The Economic and Social Commission
54 for Asia and the Pacific (ESCAP, 2018) demonstrated that “the world average is
55 only 1.2 kg of domestic material consumption per dollar of economic output; this
56 amount is roughly double in the Asia–Pacific region at approximately 2 kg” (p. 3).
57 All of these environmental and institutional factors make it necessary to consider
58 environmental reporting as a strategic priority and a source of competitive advan-
59 tage in the international arena. In contrast to Western regional firms, Asia–Pacific
60 companies usually face challenges in their internationalization process due to the
61 strict environmental regulations of host countries (Sandhu et al., 2012; Zhu et al.,
62 2012). Thus, a lack of corporate social responsibility (CSR) was found to be a trade
63 barrier for firms from other countries to gain access to Western markets (Breitbarth
64 et al., 2009). Furthermore, attaining customer interest in these markets is one of the
65 biggest challenges that Asian firms face (Srivastava et al., 2015).

66 This research proposes an institutional perspective to explain how companies
67 are developing a more proactive attitude toward reporting environmental policies,
68 perceiving them as a tool to reduce their liability of origin. This has been defined
69 as “a credibility and legitimacy deficit in the eyes of host country stakeholders
70 who [are] even more circumspect due to inefficient or missing knowledge of for-
71 eign emerging market multinational firms, their quality and safety standards, and
72 the like” (Madhok & Kayhani, 2012, p. 31). Thus, Asia–Pacific firms can use
73 the reporting of environmental policies as a tool for gaining a good reputation



74 in international markets. Along with this, there is a greater desire strategically
75 prioritize environmental problems and aligned with the SDGs. The institutional
76 perspective is particularly suitable because adopting measures to combat environ-
77 mental problems is directly conditioned by institutional pressures to comply with
78 stakeholders' regulations and expectations. Previous work has already discussed
79 this perspective by examining emerging contexts, such as in Latin America
80 (Duque-Grisales et al., 2020a). Research has shown that environmental capabili-
81 ties serve as a source of institutional acceptance in foreign markets (Aguilera-
82 Caracuel & Ortiz-de-Mandojana, 2013). Finally, using an institutional perspec-
83 tive as a reference (North, 1990), how institutional and organizational innovation
84 can help Asia-Pacific firms manage liability of origin and take advantage of the
85 reporting of environmental policies to further increase their scope of internation-
86 alization was analyzed.

87 In this study, the focus is on environmental reporting as a fundamental dimen-
88 sion of environmental proactivity. This is considered a starting point to know-
89 ing the mechanisms of environmental proactivity that allow firms to progress in
90 the environmental dimension (González-Benito & González-Benito, 2005). It is
91 assumed that the reporting of environmental policies enables firms to overcome
92 environmental entry barriers, meet green standards, and reduce the liability of
93 origin, which are factors that can facilitate the foreign expansion process.

94 Although environmental reporting constitutes an important basis for firms open-
95 ing up in foreign markets, this research argues that the impact depends on external
96 and/or internal conditions that cannot be overlooked. The previous literature based
97 on institutional theory suggests that the long-term survival of firms operating in an
98 international context requires that they gain trust from international stakeholders
99 (Kostova & Zaheer, 1999). This study examines how the relationship between envi-
100 ronmental reporting and foreign expansion is weakened/strengthened by a legitimate
101 background of Asia-Pacific firms. Concretely, the moderating role of institutional
102 and organizational innovations as sources of legitimacy is explored. It is argued
103 that firms that take advantage of their legitimate background have low incentives to
104 adopt environmental policies as a tool to reduce their liability of origin in the inter-
105 nationalization process. This paper seeks to clarify this debate by examining weak
106 and strong innovation at the country and firm levels. In particular, the study argues
107 that a weak innovative background boosts a firm's interest in reinforcing its legiti-
108 macy by increasing its reporting of environmental policies. Due to the disadvan-
109 tages associated with their background, companies meet the environmental stand-
110 ards to attenuate their legitimacy deficit. In contrast, a strong innovative background
111 reduces a firms' interest in such sources of legitimation.

112 To this end, the paper addresses the following research questions:

- 113 1. Q1. What are the effects of environmental policy reporting on internationaliza-
114 tion?
- 115 2. Q2. To what extent does the moderating role of innovation (institutional and
116 organizational) strengthen/weaken the effects of environmental policy reporting
117 on internationalization?



118 Addressing these research questions offers a twofold contribution. First, the envi-
119 ronmental reporting–internationalization nexus is explored from a novel institutional
120 perspective, which is the most prevalent in the Asia–Pacific region. Second, institu-
121 tional and organizational innovations are studied as sources of legitimacy. By doing
122 so, value is added to institutional theory (Leyva-de la Hiz et al., 2019) by showing
123 that companies from countries with a low level of innovation adjust to institutionally
124 demanding international contexts through a higher green orientation to combat their
125 liability of origin. In contrast, the environmental commitment of firms from coun-
126 tries with high-level innovation might be taken for granted. Therefore, these firms
127 are less concerned about their legitimation strategy and green reputation during their
128 internationalization path. Regarding organizational innovation, the results revealed
129 that this dimension has a nonsignificant moderating effect on the relationship.

130 This research work is divided into six sections. Following the introduction, the
131 Asia–Pacific context is reviewed in the second section. A theoretical review and
132 the hypotheses is presented in the third section. Next, the research methodology is
133 explained in the fourth section. The results of the empirical analyses are discussed in
134 the fifth section. Finally, in the sixth section, the conclusion, implications, and limi-
135 tations of the study are presented, along with future research lines.

136 **Theoretical background and hypothesis development**

137 **Importance of environmental policies in environmental proactivity**

138 Environmental proactivity has been identified as a crucial part of business strategy
139 (Bansal & Roth, 2000). Firms realize a favored expansion into new international
140 markets by taking advantage of their environmental proactivity (Martín-Tapia et al.,
141 2010). In González-Benito and González-Benito’s work (2006), environmental pro-
142 activity is defined as “the voluntary implementation of practices and initiatives to
143 improve environmental performance” (p. 88). From this definition, it is apparent
144 that environmental strategic proactivity is commonly referred to as the sum of sev-
145 eral environmental commitments. A systematic literature review on environmental
146 proactivity showed that there is a lack of consensus over its particular dimensions.
147 However, the main domains of environmental proactivity are planning and organi-
148 zational practices or environmental policies, green innovation, environmental per-
149 formance, stakeholder engagement, and operational practices (Chen et al., 2016b;
150 Delgado-Márquez & Pedauga, 2017; González-Benito & González-Benito, 2006).

151 Reporting environmental policies play an important role in environmental man-
152 agement (Ramus & Montiel, 2005; Tatoglu et al., 2015). ISO 14001 describes envi-
153 ronmental policy as a “statement by the organization of its intentions and principles
154 concerning its overall environmental performance, which provides a framework for
155 action and the setting of its environmental objectives and targets” (Sheldon, 2017,
156 p. 372). Reporting environmental policies is considered an initial and crucial step in
157 developing environmental corporate responsibility and improving environmental
158 performance (Friedman, 1992; Polonsky et al., 1992; Shah et al., 2016; Welford,
159 2013). Welford (2013) notes that “an organization’s environmental policy forms the



160 backbone and skeletal framework from which every other environmental component
161 is hung” (p. 90). In addition, through environmental policies, a firm’s stakeholders
162 can identify its philosophy and the background of activities related to its ecologi-
163 cal commitment to nature (Ramus & Montiel, 2005). Furthermore, green policies
164 enable a firm to comply with regulations, build the legitimacy of operations, and
165 achieve green competitive advantages over peers (Abdelzaher & Newburry, 2016).
166 Finally, environmental policy statements can positively affect the public’s percep-
167 tions of a firm’s proactive environmental protection practices (Henriques & Sador-
168 sky, 1999), resulting in increased market share and improved stakeholder relations
169 (Ramus & Montiel, 2005).

170 **Reporting of environmental policies and internationalization**

171 Few studies (see Duque-Grisales et al., 2020a; Martín-Tapia et al., 2008) have ana-
172 lyzed whether a firm’s environmental strategies influence their internationaliza-
173 tion. For instance, Martín-Tapia et al. (2010) found that a Spanish firm’s strategies
174 for environmental protection enhanced its entry into overseas markets. The same
175 result is echoed by Duque-Grisales et al. (2020a), who indicated that Multilatinas’
176 environmental initiatives have a positive and significant impact on their interna-
177 tionalization. These studies have focused on the institutional perspective, suggest-
178 ing that commitment to environmental protection has a positive impact on a firm’s
179 international expansion. As such, companies perceive environmental initiatives as
180 a business opportunity to gain institutional legitimacy (Aguilera-Caracuel & Ortiz-
181 de-Mandojana, 2013). To enrich the previous institutional perspective, this study
182 argues for a positive relationship between the reporting of environmental policies
183 and internationalization.

184 Environmental policies foster a responsible green reputation (Abdelzaher & New-
185 burry, 2016) among suppliers and consumers (Martín-Tapia et al., 2008). Obtain-
186 ing a green reputation boosts a firm’s overseas operations and eliminates the need
187 for intensive marketing efforts within an international context (Martín-Tapia et al.,
188 2010). Moreover, firms are induced to adopt environmental management systems
189 to overcome the green trade barriers of global markets (Haider, 2011) by meeting
190 the environmental standards of foreign countries (Dhull & Narwal, 2016). Further-
191 more, accountable and transparent corporate images committed to protecting the
192 environment (Christmann, 2004) facilitate international agreements and collabora-
193 tion (Duque-Grisales et al., 2020a). Last, environmental commitment is considered
194 an efficient tool in overcoming the liability of origin in a firm’s internationaliza-
195 tion process (Liu et al., 2018). Through environmental actions, firms comply with
196 environmental regulations, institutions are incentivized by foreign governments
197 (Dadush, 2013), and they receive less discrimination from consumers of the host
198 country (Kostova et al., 2008).

199 Consequently, it is assumed that the reporting of environmental policies allows
200 firms to increase their capability to gain institutional acceptance through overcoming
201 green entry barriers, meeting green standards of the host country, accessing interna-
202 tional agreements and collaborations, and reducing the liability of origin, which are



203 factors that facilitate the foreign expansion process. Therefore, it is proposed that
204 firms establish reporting of environmental policies as a part of their business strat-
205 egy to reach greater international expansion, leading to the following hypothesis:

206 **H1** The reporting of environmental policies positively influences a firm's scope of
207 internationalization.

208 **The moderating effect of innovation on the relationship between environmental** 209 **policies and internationalization**

210 In recent decades, innovation has been considered a source of legitimacy for
211 funders and stakeholders (Meyer et al., 2013). Legitimacy is defined as “a general-
212 ized perception or assumption that the actions of an entity are desirable, proper or
213 appropriate within some socially constructed system of norms, values, beliefs and
214 definitions” (Suchman, 1995, p. 574). In this sense, being innovative has become
215 a desirable attitude (Brandl & Bullinger, 2009; Meyer et al., 2013). In this study,
216 we consider the organizational and institutional levels that enable companies to be
217 protected with the necessary legitimacy in the international arena. Each level ena-
218 bles firms to access different features, factors, and/or tools. Moreover, organizational
219 innovation is not necessarily aligned with institutional innovation. Indeed, a firm can
220 possess a very high capacity for innovation, but the institutional environment might
221 not benefit it and vice versa. Hence, it is essential to study both dimensions of inno-
222 vation as distinctive signs to achieve greater legitimacy in foreign markets, reducing
223 the adverse effects of liability of origin to operate in other markets (Leyva-de la Hiz
224 et al., 2019).

225 On the one hand, institutional innovation refers to configurations of institutions
226 that foster the development of technology (Khedhaouria & Thurik, 2017; Nelson
227 & Rosenberg, 1993). In addition, innovation at the country level acts as a driver
228 for firms to absorb, adapt and implement advanced technologies (Nelson & Winter,
229 1982). It also encourages companies to have “the capacity to turn ideas into new
230 goods and services” (WEF, 2018, p. 42). A high level of innovation at the country
231 level enables a firm to better signal its environmental progress based on the guar-
232 anteed implementation of innovative processes in its country of origin (Ortiz-de-
233 Mandojana et al., 2011). Thus, firms with strong innovation capability at the country
234 level may enjoy a prior legitimation (Leyva-de la Hiz et al., 2019) and greater cred-
235 ibility regarding environmental responsibility messaging.

236 On the other hand, organizational innovation enables them to generate, integrate, **AQ2**
237 and exploit their resources to engage in new product or service development (Tajvidi
238 & Karami, 2015; Tan & Sousa, 2019). A firm's innovation has become one of the
239 essential factors for the survival and development of organizations in competitive
240 markets (Kwakwa et al., 2018). Highly innovative firms have great flexibility in the
241 ever-changing market and gain and sustain competitive advantage (Li et al., 2019).
242 In this sense, innovative firms tend to be seen as more proactive in CSR activities
243 (e.g., Shen et al., 2016). This can be explained by the fact that these activities may
244 require R&D efforts by firms, suggesting that innovation initiatives may be driven



245 by sustainability goals (Jain & Krishnapriya, 2020), which in turn may signal a
 246 firm's capacity to adapt the product to fit local requirements. Thereby, innovation
 247 firms can send "a signal to the marketplace pertaining to the firms' commitment
 248 toward the fulfillment of relational obligations" (Rahman et al., 2020, p. 2006) in the
 249 adoption of environmental approaches.

250 Thus, firms from highly innovative backgrounds (institutional and organizational) **AQ3**
 251 can have low incentives to adopt environmental policies as a legitimization strategy
 252 that can favor their internationalization process (Babiak & Trendafilova, 2011).
 253 Given this, it is expected that when the level of innovativeness is higher, the impact
 254 of environmental reporting on the scope of internationalization will be weaker. In
 255 contrast, firms characterized by low levels of innovative backgrounds (institutional
 256 and organizational) may face greater scrutiny when operating globally (Fiaschi
 257 et al., 2017). Therefore, the following is hypothesized:

258 **H2a** Institutional innovation negatively moderates the relationship between the
 259 reporting of environmental policies and the firm's scope of internationalization.

260 **H2b** Organizational innovation negatively moderates the relationship between the
 261 reporting of environmental policies and the firm's scope of internationalization.

262 The conceptual framework of this study is shown in Fig. 1. **AQ4**

263 **Data and methodology**

264 **Sample and data collection**

265 The data were drawn from two different databases, including the Thomson Reuters **AQ5**
 266 Eikon database to collect information relating to environmental policy, interna-
 267 tionalization, organizational innovation, and control variables. This source offers a

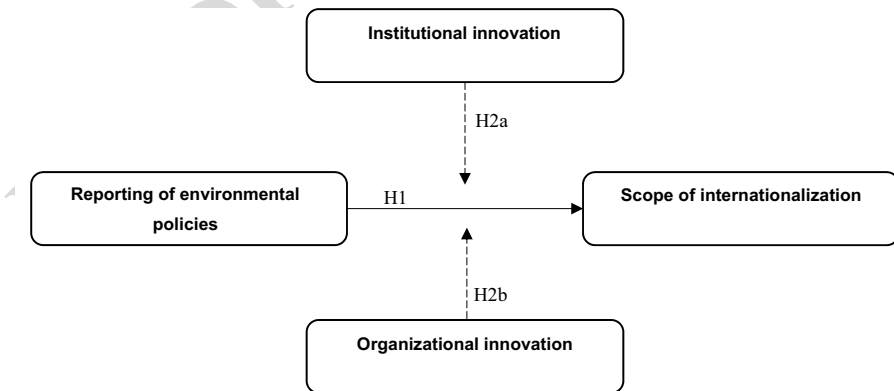


Fig. 1 Conceptual framework



268 comprehensive platform for establishing customizable benchmarks for the assess-
269 ment of firms' operating behavior, environmental management and financial perfor-
270 mance (Ellimäki et al., 2021). It has been employed by several empirical studies on
271 CSR performance (Ellimäki et al., 2021; Hartmann & Vachon, 2018; Hawn & Ioan-
272 nou, 2016).

273 The final sample comprised 91 firms during the period from 2014 to 2018. In this
274 panel analysis, the sample period was limited due to the availability of data. Initially,
275 27,342 Asia–Pacific firms were identified that were included in the Thomson Reu-
276 ters Eikon database. Then, only 339 firms out of the 27,342 listed reported informa-
277 tion about environmental policies and control variables for the periods considered
278 in this study. This lack of information is because environmental, social, and govern-
279 ance performance data (ESG) are available for only 6000 global companies world-
280 wide (Pérez-Cornejo et al., 2019). Out of the 339 firms, 152 were eliminated since
281 it was not possible to find information on their foreign sales. Finally, only firms that
282 reported the distribution of the percentage of sales in the different regions were con-
283 sidered. As a result, 91 firms retained environmental and foreign revenue informa-
284 tion. All ten economic sectors included in the Thomson Reuters Business Classification
285 were represented in the study (Gallego-Álvarez, 2018; Koseoglu et al., 2021).

286 Despite missing data, Thomson Reuters Eikon provides accurate and reliable
287 information (Cheng et al., 2014) and investment analysis tools for professional inves-
288 tors (Gómez-Bolaños et al., 2020). Furthermore, the complexity of the variables
289 used in this study, such as international diversification, makes it more difficult to
290 obtain a large number of observations. Last, it is important to highlight that Thom-
291 son Reuters Eikon only includes the information that firms are willing to disclose
292 (Gómez-Bolaños et al., 2020). In the particular case of the Asia–Pacific region, it
293 appears that firms may be more reluctant to disclose information.

294 Table 1 shows the composition of the sample based on firms' country of origin
295 and their industrial sectors. The included sectors are basic materials, consumer
296 cyclical, consumer noncyclical, energy, financials, health care, industrial, technol-
297 ogy, telecommunications service, and utilities. In addition, 11 countries were classi-
298 fied either as developed or developing, according to the MSCI market classification
299 followed by Eikon.

300 Variable measurement

301 Scope of internationalization

302 Although it is common to measure internationalization by dividing the ratio of for-
303 eign sales by total sales revenue (Attig et al., 2016), the entropy index defined by
304 Hitt et al. (1997) was used since “one simple measure of the scale of international-
305 ization does not provide a fine-grained measure of its scope” (D'Angelo et al., 2016,
306 p. 539). The measurement of internationalization as geographical distribution of
307 sales was proposed by Rugman and Verbeke (2004) since “two firms may show sim-
308 ilar export intensities, but one could export to a single neighboring country, while a



Reporting of environmental policies and internationalization...

Table 1 Sample description by country and sector

Description	Australia	China	Hong Kong	Indonesia	Japan	Malaysia	Philippines	Singapore	South Korea	Taiwan	Thailand	Total
Basic Materials	5	1	1	0	0	0	0	0	2	3	0	12
Consumer Cyclical	1	1	4	0	4	1	0	0	1	1	1	14
Consumer Noncyclical	2	0	0	1	1	3	0	1	0	1	1	10
Energy	2	2	1	0	0	0	0	0	0	0	1	6
Financials	1	1	10	0	0	1	1	3	0	0	0	17
Healthcare	0	0	0	0	1	0	0	0	0	0	0	1
Industrials	1	0	2	0	2	0	0	2	2	2	2	13
Technology	0	1	0	0	2	0	0	0	0	10	0	13
Telecommunications Service	0	0	1	0	1	1	0	0	0	0	0	3
Utilities	0	0	0	0	0	1	0	1	0	0	0	2
Total	12	6	19	1	11	7	1	7	5	17	5	91



309 second had sales to many countries over three continents (D'Angelo et al., 2016, p.
310 539).

311 Hence, a firm's revenue from international sales was divided into four large geo-
312 graphical areas (Hitt et al., 1997): the Americas, Europe, Asia and the Pacific, and
313 Africa. Then, following previous empirical research that tests the effects of interna-
314 tional diversification (D'Angelo et al., 2016; Gomez-Mejia et al., 2010), the entropy
315 index defined by Hitt et al. (1997) was:

$$316 \text{ Entropy} = \sum_i^4 X_i * \ln\left(\frac{1}{X_i}\right),$$

317 where X_i represents the percentage of revenue from sales in region "i." This index
318 accounts for the number of international regions where the firms operate, as well
319 as the sales dimension in each region. Lower values of this index would imply a
320 low level of a firm's international diversification, from 0 for non-internationalized to
321 higher values for more international diversified firms.
322

323 Reporting of environmental policies

324 The independent variable in this research is the reporting of environmental poli-
325 cies, which consists of five items: resource reduction policy; water efficiency policy;
326 energy efficiency policy; emission policy; and waste reduction policy. These dimen-
327 sions have been employed by several empirical studies in the environmental litera-
328 ture (e.g., Duque-Grisales et al., 2020a; Gómez-Bolaños et al., 2020). Each envi-
329 ronmental policy is a dummy variable representing whether a firm has (value 1) or
330 has not (value 0) implemented it. Following previous studies (e.g., Gómez-Bolaños
331 et al., 2020), an index was compiled that represents the percentage of environmental
332 policies that a firm adopts out of the total number of policies considered. Thus, the
333 variable of environmental policies ranges from 0 (indicating no environmental pol-
334 icy implemented) to 100 (indicating all environmental policies implemented). The
335 dimensions' definition is included in Appendix I.

336 Institutional innovation

337 Institutional innovation was drawn from the WEF's Global Competitive Index. The
338 innovation capability measure represents the 12th pillar of this index. It enables an
339 assessment of each economy's innovation ecosystem. The innovation capability var-
340 iable comprises indicators on the "softer" and less tangible aspects of idea genera-
341 tion, captured in the interaction and diversity, as well as research and development,
342 to enable inventions, and commercialization subpillars, whose capacity brings inno-
343 vation to the market successfully. To measure the innovation capability of a country,
344 the WEF includes ten components: diversity of the workforce; state of cluster devel-
345 opment; international co-invention; multistakeholder collaboration; scientific pub-
346 lications; patent applications; R&D expenditures; research institutions prominence
347 index; buyer sophistication; and trademark applications (WEF, 2018, p. 641). The
348 components' definitions are detailed in Appendix II. From these ten components,



349 the WEF generates one value of institutional innovation, which ranges from low (0)
350 to high (100).

351 **Organizational innovation**

352 This study draws on previous research (Rahman et al., 2020; Rubera & Kirca, 2012)
353 to measure organizational innovation as yearly R&D expenditures divided by yearly
354 sales revenue. In the environmental literature (Duque-Grisales et al., 2020b), it has
355 been considered that firms' innovation generates strategic value in international
356 contexts.

357 **Control variables**

358 Some control variables were included to mitigate potential bias in the estimates. At
359 the country level, the gross domestic product per capita (GDP pp) was considered
360 an important factor in internationalization, since it represents the market size of the
361 country (Noailly & Ryfisch, 2015). Firms from some countries are more internation-
362 alized because of the restricted domestic market size (Krist, 2009). At the firm level,
363 a firm's relevant features were included in the internationalization process. As previ-
364 ous studies (Aragón-Correa, 1998; Chen et al., 2016a) suggest, firm size is associ-
365 ated with a higher level of available resources and scale advantage (Mishina et al.,
366 2004). The size of the firm was operationalized as the natural logarithm of the total
367 revenue of sales. Furthermore, firm age was controlled for, as older firms tend to
368 engage in international operations due to their greater knowledge and experience
369 in the domestic market (Johanson & Vahlne, 1977). This variable was measured as
370 the number of years between the foundation of the firm and the observation year.
371 Following previous studies (e.g., Oesterle et al., 2013), a firm's ownership type was
372 controlled for as a dummy variable, where 1 stands for state-owned enterprise and 0
373 otherwise. We expect state-owned firms to benefit from particular critical resources
374 and governmental support in internationalization (Bai et al., 2019).

375 Additionally, as firms can leverage their abundant resources to facilitate access
376 to new markets (Carneiro et al., 2018), financial slack was controlled for, measured
377 as an assets-to-liabilities ratio (Symeou et al., 2019). The firm industry was further
378 controlled for due to differences in internationalization incentives and degrees per
379 industry (e.g., Carpenter & Fredrickson, 2001; Lin & Liu, 2012). In this model, year
380 and country dummies were also included. Last, the scope of internationalization
381 can be influenced by firms' return on equity. When a firm's financial performance
382 improves, the firm is more likely to expand internationally (Audia & Greve, 2006).
383 Appendix III reports the measurements and sources for all the variables used in the
384 paper.

385 **Data analysis**

386 STATA 14 software was used, employing a multilevel modeling technique to test
387 the hypotheses. A multilevel modeling technique presents some advantages over



388 traditional linear regression (Ortas et al., 2019): (1) it captures the within-cluster
389 dependence often shown by databases of firms from different countries; (2) it pro-
390 vides the ability to estimate unbiased coefficients and standard errors, thus enhanc-
391 ing the robustness of the results; and (3) it manages the variability of a firm's
392 internationalization on three levels of analysis (i.e., firms, periods and countries).
393 Multilevel modeling has received wide acceptance in the literature and has been
394 used in earlier international studies (e.g., Hartmann & Uhlenbruck, 2015; Ortas
395 et al., 2019). The multilevel model makes it possible to divide the variance of the
396 dependent variable into three variances: (a) firms, (b) years, and (c) countries, with a
397 slope of country development (developed or developing).

398 Results

399 Table 2 shows the descriptive summary and Pearson correlation values for each vari-
400 able used in this paper.

401 To assess multicollinearity, the variance inflation factors (VIFs) were checked,
402 and the values ranged from 1.07 to 1.92. According to Hair e al. (2009), values
403 below five indicate that there are no severe problems with multicollinearity. In
404 Table 3, the key findings of the study are detailed.

405 Model 1 shows the control variable results. The findings show that size and
406 age have a positive and significant impact on a firm's internationalization degree.
407 Moreover, in Model 2, Hypothesis 1 is tested, and it predicts a positive relationship
408 between the reporting of environmental policies and internationalization. Hypoth-
409 esis 1 is confirmed, as the coefficient is positive and significant. Furthermore, Model
410 3 tests Hypothesis 2a, which indicates a negative moderating role of institutional
411 innovation between the reporting of environmental policies and internationaliza-
412 tion. Figure 2 helps to visually check the effect hypothesized. Finally, Model 4 tests
413 Hypothesis 2b, which predicts a negative moderating role of organizational innova-
414 tion between the reporting of environmental policies and internationalization. Model
415 4 revealed that organizational innovation has a positive, but not statistically signifi-
416 cant, moderating effect on the relationship. Hence, whereas H2a is supported, H2b
417 is not confirmed for the sample firms.

418 Beyond these findings, it is confirmed that a country's effect is also present and
419 that a firm's scope of internationalization varies across countries with a slope of
420 country development.

421 Robustness tests

422 The results of these studies were consistent across different methods where similar
423 values were obtained. First, the effect of reporting environmental policies on inter-
424 nationalization without control variables was explored. The results of this regres-
425 sion, as shown in Table 4, were significant and positive.



Reporting of environmental policies and internationalization...

Table 2 Descriptive statistics and correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Internationalization	1.000										
(2) GDP pp(log)	0.042	1.000									
(3) Age (log)	0.208***	0.027	1.000								
(4) Size (log)	0.366***	-0.144***	0.167***	1.000							
(5) Ownership	0.063	-0.198***	-0.027	0.070	1.000						
(6) Country Development	-0.020	0.801***	0.054	-0.174***	-0.077	1.000					
(7) ROE	-0.047	-0.061	-0.081*	0.106**	-0.168***	-0.143***	1.000				
(8) Slack (log)	-0.014	0.182***	0.052	-0.469***	-0.049	0.118**	-0.092*	1.000			
(9) Environmental Policies	0.267***	0.059	0.091*	0.229***	0.128***	0.138***	-0.052	-0.115**	1.000		
(10) Institutional innovation	0.286***	0.547***	0.118**	0.067	-0.311***	0.165***	0.073	0.189***	-0.055	1.000	
(11) Organizational innovation	0.090*	0.005	-0.013	-0.046	-0.026	-0.141***	0.024	0.298***	0.017	0.287***	1.000
Mean	0.399	10.189	3.513	21.887	-	-	9.682	0.851	0.777	0.677	0.014
SD	0.305	0.755	0.732	1.494	-	-	8.0041	0.571	0.328	0.094	0.037
Min	0	7.955	0	16.978	0	0	-34.9	0.05	0	0.371	0
Max	1.096	10.189	4.89	25.792	1	1	47.8	2.714	1	0.808	0.24

* $p < .1$; ** $p < .05$; *** $p < .01$



Table 3 Multilevel linear regression

	Model 1	Model 2	Model 3	Model 4
Fixed effects				
GDP pp	0.043 (0.032)	0.023 (0.033)	0.018 (0.034)	0.023 (0.034)
Firm age	0.094*** (0.032)	0.032** (0.032)	0.069** (0.033)	0.076** (0.034)
Firm size	0.032** (0.012)	0.034*** (0.005)	0.032** (0.007)	0.034*** (0.012)
Ownership	0.120 (0.152)	0.099 (0.503)	0.079 (0.150)	0.099 (0.149)
Slack	- 0.005 (0.028)	- 0.004 (0.028)	- 0.001 (0.028)	- 0.004 (0.028)
ROE	- 0.001 (0.001)	- 0.001 (0.001)	- 0.001 (0.001)	- 0.001 (0.001)
Environmental policies		0.074*** (0.027)	0.660*** (0.170)	0.068** (0.029)
Institutional innovation		0.073 (0.125)	0.828*** (0.250)	0.068 (0.126)
Organizational innovation		- 0.321 (0.603)	- 0.170 (0.599)	- 0.698 (0.911)
Environmental Policies X Institutional innovation			- 0.903*** (0.259)	
Environmental Policies X Organizational innovation				0.380 (0.577)
Industry dummies included	Yes	Yes	Yes	Yes
Cons	- 1.089** (0.435)	- 0.953** (0.432)	- 1.336** (0.447)	- 0.942** (0.433)
Random effects				
Firm	0.232 (0.018)	0.226 (0.018)	0.227 (0.018)	0.226 (0.018)
Year	0.057 (1.577)	0.055 (0.762)	0.052 (0.792)	0.055 (1.352)
Country (development)	0.074 (0.011)	0.079 (0.010)	0.081 (0.010)	0.079 (0.010)
Residual	0.026 (2.265)	0.028 (0.028)	0.031 (0.973)	0.026 (1.883)
Log likelihood	244.143	247.863	253.747	248.018
No. firms	91	91	91	91
No. observations	441	441	441	441

Standard errors are reported in parentheses

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

426 Second, the results were compared across different regression techniques
 427 by using both multilevel modeling techniques and traditional linear regression.
 428 Table 5 summarizes the results of the random effects regression.



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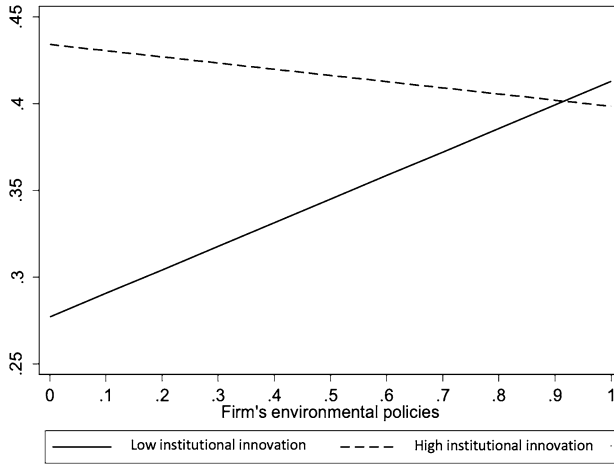


Fig. 2 The moderating effect of institutional innovatoin

Table 4 Multilevel linear regression with control variables

	Model 1
Fixed effects	
Environmental policies	0.097*** (0.027)
Cons	0.319*** (0.036)
Random effects	
Firm	0.280 (0.021)
Year	0.056 (0.579)
Country (development)	0.081 (0.010)
Residual	0.027 (0.724)
Log likelihood	225.346
No. firms	91
No. observations	441

Standard errors are reported in parentheses

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

429 Additionally, the dynamic panel model was tested in an effort to minimize the
 430 effect of possible reverse causality on the results (Blundell & Bond, 1998; Chen &
 431 Tan, 2012). This model was not employed as a principal regression in the research
 432 since lagging the dependent variable in multilevel regression can induce a down-
 433 ward bias in the coefficients of explanatory variables. The results reported suggested
 434 a marginally significant relationship with a p value of 0.056 for the relationship



Table 5 Random effects regression

	Model 1	Model 2	Model 3	Model 4
GDP pp	0.043 (0.034)	0.027 (0.036)	0.024 (0.036)	0.028 (0.036)
Firm age	0.096*** (0.033)	0.080** (0.034)	0.073 (0.036)	0.080** (0.033)
Firm Size	0.034*** (0.012)	0.344*** (0.012)	0.037** (0.012)	0.037*** (0.012)
Ownership	0.122 (0.161)	0.106 (0.158)	0.085 (0.158)	0.105 (0.157)
Slack	0.021 (0.028)	0.030 (0.029)	0.029 (0.029)	0.029 (0.029)
ROE	- 0.001 (0.001)	- 0.001 (0.001)	- 0.001 (0.001)	- 0.001 (0.001)
Environmental policies		0.054 (0.029)	0.636*** (0.197)	0.048 (0.030)
Institutional innovation		0.063 (0.148)	0.802** (0.289)	0.053 (0.150)
Organizational innovation		0.060 (0.638)	0.173 (0.635)	- 0.505 (0.997)
Environmental policies X Institutional innovation			- 0.886*** (0.297)	
Environmental policies X Organizational innovation				0.581 (0.796)
Industry dummies included	Yes	Yes	Yes	Yes
Cons	- 1.173 (0.452)	- 1.100 (0.449)	- 1.529 (0.470)	- 1.085 (0.448)
No. firms	91	91	91	91
No. observations	441	441	441	441

Standard errors are reported in parentheses

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

435 between the reporting of environmental policies and internationalization. The mar-
 436 ginal results can be due to the lower number of observations as a consequence of the
 437 lagged dependent variable. Furthermore, in Table 6, the results of reporting envi-
 438 ronmental policies as a direct account of these policies are illustrated. These results
 439 were consistent with the main measurement.

440 Moreover, the different roles of each environmental policy were tested on inter-
 441 nationalization. Although the dimensions of environmental policies have been
 442 employed by several empirical studies in the environmental literature (e.g., Duque-
 443 Grisales et al., 2020a; Gómez-Bolaños et al., 2020), the distinct role of different
 444 dimensions of a firm's environmental policies were captured by testing the impact of
 445 each dimension on the degree of internationalization. The results show that energy
 446 efficiency and waste reduction policies have a significant impact on a firm's interna-
 447 tionalization. Nevertheless, resource reduction, emissions and water efficiency poli-
 448 cies have a nonsignificant influence on firms' internationalization.



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Table 6 Direct count of environmental polices

	Direct count of environmental polices
Fixed effects	
GDP pp	0.023 (0.033)
Firm age	0.075** (0.032)
Firm size	0.034*** (0.012)
Ownership	0.099 (0.149)
Slack	0.004 (0.028)
ROE	- 0.001 (0.001)
Environmental polices	0.015*** (0.005)
Institutional innovation	0.073 (0.125)
Organizational innovation	- 0.321 (0.603)
Industry dummies included	Yes
Cons	- 0.953** (0.432)
Random effects	
Firm	0.226 (0.018)
Year	0.055 (0.762)
Country (development)	0.079 (0.010)
Residual	0.028 (0.028)
Log likelihood	247.863
No. firms	91
No. observations	441

Standard errors are reported in parentheses

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

449 **Discussion, conclusion, and limitations**

450 Using institutional theory, a significant and positive relationship between the report-
 451 ing of environmental policies and the scope of internationalization was shown. It
 452 has been confirmed that in the international context, environmental policies acquire
 453 special relevance because they increase a firm's capability to overcome green entry



454 barriers, meet the high green standards of the host country, access international
455 agreements and collaborations, and reduce the liability of origin, which are factors
456 that facilitate the foreign expansion process. Thus, companies are developing a more
457 proactive attitude toward environmental issues, perceiving them as a legitimacy tool.

458 In addition, different dimensions of a firm's environmental policies were exam-
459 ined by testing the impact of each dimension of the internationalization degree. The
460 results show that energy efficiency and waste reduction policies significantly impact
461 firms' internationalization. The study argues that the energy efficiency impact on
462 internationalization since the Asia–Pacific region shows a long-term decline in
463 energy intensity, dropping from 7.3 megajoules/\$ in 2000 to 5.2 megajoules/\$ in
464 2018 and now approaching the global average of 4.6 megajoules/\$ (ESCAP, 2021).
465 Achieving this annual reduction rate of 2.2% from 2010 to 2018 demonstrates the
466 region's commitment to the delivery of energy efficiency. Waste reduction reporting
467 is another promising avenue for companies, as the region is committing to reducing
468 plastic waste, engaging in recycling, and e-waste management activities (ESCAP,
469 2020, ESCAP, 2021).

470 Interestingly, it was found that resource reduction and water efficiency policies
471 have a nonsignificant influence on a firm's internationalization, whereas emis-
472 sion policy has a marginal significance. This might be because these policies of
473 Asia–Pacific firms do not generate specific real effects on their natural environment.
474 Consequently, firms cannot gain institutional legitimacy due to a clear gap between
475 intentions and actions in resource reduction. Refinitiv (2020) reveals that slightly
476 more than a third (36%) of Australian firms have a water efficiency policy, but only
477 11% maintain specific targets. Another report by Refinitiv (2019) shows that 62%
478 of the firms in Asia have a water efficiency policy, but only 16% maintain specific
479 water efficiency targets. Although 60% of firms have water efficiency policies in Sin-
480 gapore, only 18% maintain targets (Refinitiv, 2019). Regarding setting targets for
481 a resource reduction policy (Refinitiv, 2019), 82% of firms in Asia have resource
482 reduction policies, while only a quarter (28%) have actual resource reduction targets
483 of environmental policies, leading to a nonsignificant influence on firms' interna-
484 tionalization. The gap between intentions and actions, as well as disparities within
485 the region, remain in emissions policies. For instance, 53% of Singaporean com-
486 panies have emissions policies, and 33% have emissions reduction targets, whereas
487 77% of Chinese companies have emissions policies, but only 8% have reduction tar-
488 gets. Along with this, the Asia–Pacific region's commitment to emissions reduction
489 is questionable, as it has the most negative ecological footprint on the globe (Lane,
490 2014). Thus, the potential gaps between established actions and generated impact
491 can negatively influence stakeholders' perceptions and cast doubt on credibility.
492 Thus, future studies could focus on different dimensions of a firm's environmental
493 policies within the scope of internationalization.

494 Moreover, this study shows that firms from countries with a liability of origin
495 make greater efforts to comply with external environmental regulations and insti-
496 tutions (Ellimäki et al., 2021; Leyva-de la Hiz et al., 2019). Through environmen-
497 tally responsible activities, firms overcome the negative perceptions entailed by the



498 liability of origin (Branco et al., 2019; Ellimäki et al., 2021; Marano & Kostova,
499 2016). Hence, firms from countries with low institutional innovation must attenu-
500 ate their legitimacy deficit, as they have a greater need to operate abroad and prove
501 that they meet the environmental standards of developed and emerging countries
502 (due to having a liability of origin). In this way, they can obtain a “license to oper-
503 ate in foreign markets,” reinforcing their reputation at an international level, despite
504 being from countries with low institutional innovation. In contrast, firms from
505 countries with a high level of institutional innovation are not concerned as much
506 about obtaining reputation and international legitimacy because they already belong
507 to a context classified as innovative. Firms from highly innovative countries have
508 already met international standards since their creation, and thus, this national capa-
509 bility does not serve as a booster in the environmental policy–internationalization
510 nexus. In contrast, those firms from low innovative countries are, by default, at a
511 clear disadvantage compared to their peers from innovative countries. This situa-
512 tion of inferiority enforces the efforts carried out by firms to cope with international
513 standards and, in turn, fortifies the relationship between the reporting of environ-
514 mental policies and internationalization. Although the country-of-origin literature
515 mainly argues that companies invest in CSR activities to internationalize toward a
516 more developed host country (Campbell et al., 2012; Miller et al., 2008). Recent
517 studies argue that it occurs in their internationalization towards both developed and
518 emerging countries (Forcadell & Aracil, 2019; Huang & Chen, 2022). These studies
519 are based on the perspective of corporate social responsibility institutional neces-
520 sities (CSRINs), which means multinational companies should adopt more proac-
521 tive strategies to generate mutual benefits and prosperity for both the company and
522 the emerging host country (Forcadell & Aracil, 2019). As these emerging countries
523 have a greater need for CSR, firms take advantage of these needs to engage in CSR
524 activities and gain higher legitimacy from the institutional actors. In the context of
525 Asia–Pacific firms, Child and Tsai (2005) found that companies that internationalize
526 to China are increasingly expected to demonstrate socially responsible leadership
527 in respect to their environmental strategies. Similarly, a recent study by Huang and
528 Chen (2022) shows that high-tech companies from Taiwan adopt socially responsi-
529 ble actions when engaging with emerging markets in China.

530 Furthermore, with regard to organizational innovation, these findings are not sta-
531 tistically significant. Hence, future studies should entail a detailed examination of
532 the effects of organizational innovation. The nonsignificant result may be because
533 the majority of the Asia–Pacific region has low levels of R&D expenses, which
534 reflects the low levels of organizational innovation. As such, firms do not have the
535 capacity to generate legitimacy through high organizational innovation. Conse-
536 quently, high organizational innovation does not weaken the impact of environmen-
537 tal reporting on its scope of internationalization. Overall, the research contributes
538 to institutional theory by studying novel moderating dimensions distinct from those
539 typically studied and reinforces the existing link between developed and emerging
540 countries.



541 The research has considerable implications for managerial practices. Firms that
542 are willing to expand their businesses internationally need to establish elementary
543 environmental strategies as a way of building a solid green reputation (Dowell et al.,
544 2000) to integrate international stakeholder interests (Christmann, 2004), to dimin-
545 ish the liability of origin and to rise above business rivals in host country markets
546 (Chen et al., 2016b).

547 This research may have some limitations that serve as a basis for further stud-
548 ies on international business. The first limitation is related to the measurement of
549 international diversification since countries were grouped into four global markets
550 (Hitt et al., 1997): the Americas, Europe, Asia and the Pacific, and Africa. This
551 approach can be debatable because the countries of each region can be heteroge-
552 neous in terms of their cultures, consumer tastes, political system, market environ-
553 ment, and administrative mechanisms (Gomes & Ramaswamy, 1999). Future studies
554 could provide additional empirical findings to confirm the robustness of the find-
555 ings in the Asia–Pacific region, especially given the rich variety and heterogene-
556 ity of firms operating in the region. Moreover, future research might also measure
557 international diversification as the number of MNE operations abroad (subsidiaries,
558 joint ventures, alliances) to test the impact of environmental policies on different
559 international inter-linkages.

560 Second, although the Thomson Reuters Eikon database is considered a reli-
561 able source of information (Cheng et al., 2014), it can only include the information
562 that firms are willing to disclose (Gómez-Bolaños et al., 2020). Hence, there is a
563 need for caution when extrapolating on the conclusions of other firms within the
564 region. Third, as the focus has been on the Asia–Pacific context, the findings can-
565 not be generalized to firms in other geographical regions. As such, further studies to
566 explore the institutional perspective of the environmental–internationalization nexus
567 in developed and/or developing regions are encouraged. Fourth, for the moderating
568 effect, the focus was on the country’s role in the relationship between the report-
569 ing of environmental policies and internationalization. Whether host countries have
570 lower or higher standards of requirements than the country of origin was not con-
571 trolled for, as it is beyond the scope of this paper. This is because how the reporting
572 environmental policies allow firms to internationalize was explored, and the sample
573 requires including international and non-international firms. It would be highly sig-
574 nificant for future research to explore whether the host country’s institutional inno-
575 vation matters when firms decide to both adopt proactive environmental approaches
576 and expand into international markets. Additionally, the counterintuitive finding of
577 a negative moderating effect of a country of origin’s institutional innovation in the
578 Asia–Pacific region can encourage researchers to investigate the sign of the effect
579 of this country aspect in other developing (i.e., Latin America, Africa) and devel-
580 oped regions (i.e., Europe, North America). Additionally, further research can focus
581 on other moderating effects, such as different country institutional aspects (e.g., the
582 macroeconomic environment, market size, infrastructure, CSR ranking, regulatory
583 dimension, or reputation) or distinct organizational innovation measurements (non-
584 R&D expenditures, technology improvements indicators, and training expenditures
585 related to innovation activities).



586 Moreover, one limitation of the study is the possibility of reverse causality.
587 To minimize the effect of possible reverse causality on the results, a dynamic
588 regression model with a lagged dependent variable was conducted (Blundell &
589 Bond, 1998; Chen & Tan, 2012). The results suggested a marginally significant
590 relationship with a p value of 0.056 for the relationship between the reporting of
591 environmental policies and internationalization. Therefore, it is strongly recom-
592 mended that future studies assess the potential causality using different statisti-
593 cal analyses. Finally, although the longitudinal sample covers diverse indus-
594 tries and countries, it may imply some potential methodological concerns, such
595 as heterogeneous and unequal distributions. This limitation emerges from the
596 lack of ESG data for corporations. The database reports that these data are only
597 available for 6,000 global companies worldwide (Pérez-Cornejo et al., 2019).
598 Therefore, further studies to increase the sample size to test the replicability of
599 these results are urged. Along with this, it is critical to examine the peculiarities
600 of each industry, such as the tendency toward internationalization or controver-
601 sial issues in environmental policies.

602 A further line of continuation of this work is to realize an in-depth analy-
603 sis of the core motives of Asia–Pacific firms in terms of environmental trans-
604 formation to complete a picture of environmental behavior and its influence on
605 internationalization. Future researchers can focus on how managers from these
606 firms perceive the importance of environmental proactivity, the implementation
607 of environmental standards, such as ISO 14001, and the environmental decision-
608 making process of managers and their commitment to nature. In addition, schol-
609 ars can investigate the main drivers of internationalization for these firms and
610 their relationship with stakeholders in international business. It would also be
611 relevant to study the influence of the institutional distance between home and
612 host countries to determine how environmental and internationalization pat-
613 terns flow (Aguilera-Caracuel et al., 2013; Raziq et al., 2021; Ye et al., 2022) in
614 emerging market firms.

615 It is important to highlight that a fast-growing economy and a high level of
616 industrialization can lead the Asia–Pacific region to slack on its commitment to
617 nature. However, the results suggest that these firms are in the first step of envi-
618 ronmental transformation. These firms are using this transformation to obtain
619 greater legitimacy in international markets, leading them to accept and adapt
620 their actions following their environmental plans. Even though implementing
621 environmentally friendly policies may not guarantee that these firms will take
622 action to face ecological challenges, it is an optimal way to gain access to new
623 demanding markets by opting to go green. Second, as expected, initiating action
624 on environmental issues can take a long time. Stakeholders can interpret envi-
625 ronmental policies as a corporate greenwash (Meng et al., 2019) if firms do not
626 change their ways of producing, working, and operating in future years. These
627 results are useful and can awaken environmental awareness among Asia–Pacific
628 firms. It is hoped that the findings will encourage researchers to analyze firm
629 environmental behavior and internationalization in the context of this promising



630 region. These companies can show their environmental commitment by incor-
631 porating the Sustainable Developmental Goals (SGD) approved by the UN
632 (OECD, 2021) into their business strategy and governance system. In the cur-
633 rent pandemic context, now more than ever, the innovative capability of nations
634 is especially relevant. It enables adaptation to uncertain situations by creating
635 an innovation ecosystem where all agents, including organizations, can benefit
636 and establish alliances making cooperation agreements in the field of sustain-
637 able innovation.

638 Appendix

639 See Tables 7, 8, and 9.

Table 7 Dimensions reporting of environmental policies

Dimension	Definition
Resource Reduction Policy	The company has a policy for reducing the use of natural resources, or to lessen the environmental impact of its supply chain
Water Efficiency Policy	The company has various forms of processes/mechanisms/procedures to improve water use in operation efficiently; a system or a set of formal documented processes for efficient use of water and driving continuous improvement
Energy Efficiency Policy	The company has various forms of processes/mechanisms/procedures to improve energy use in operation efficiently; a system or a set of formal documented processes for efficient use of energy and driving continuous improvement
Emissions Policy	The company has a policy to improve emission reduction. In scope, they are the various forms of emissions to land, air, or water from the company's core activities – processes, mechanisms, or programs in place as to what the company is doing to reduce emissions in its operations' system or a set of formal, documented processes for controlling emissions and driving continuous improvement
Waste Reduction policy	The company has initiatives to reduce any type of waste generated by reporting organizations; a partnership with waste management companies to treat waste generated – does not include the data on waste management companies, which collect and recycle the waste for their customers



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Table 8 Components of Institutional Innovation extracted from WEF Global Competitiveness Report

Component	Definition	Source
Diversity of the workforce	Response to the survey question "In your country, to what extent do companies have a diverse workforce (e.g., in terms of ethnicity, religion, sexual orientation, gender)?" [1 = not at all; 7 = to a great extent]	World Economic Forum, Executive Opinion Survey
State of clusters development	Response to the survey question "In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)?" [1 = nonexistent; 7 = widespread in many fields]	World Economic Forum, Executive Opinion Survey
International co-invention	Number of patent family applications with co-inventors located abroad per million population	Organisation for Economic Co-operation and Development (OECD), STI Micro-data Lab: Intellectual Property database
Multi-stakeholder collaboration	Average score of the following three Executive Opinion Survey questions: "In your country, to what extent do people collaborate and share ideas within a company?" [1 = not at all; 7 = to a great extent]; "In your country, to what extent do companies collaborate in sharing ideas and innovating?" [1 = not at all; 7 = to a great extent]; "In your country, to what extent do business and universities collaborate on research and development (R&D)?" [1 = do not collaborate at all; 7 = collaborate extensively]	World Economic Forum, Executive Opinion Survey
Scientific publications	Measures the number of publications and their citations, expressed at the country level	SCImago, Journal & Country Rank
Patent applications	Total number of patent family applications per million population	Organisation for Economic Co-operation and Development (OECD)
R&D expenditures	Expenditures on research and development (R&D), expressed as a percentage of GDP	World Bank, World Development Indicators database
Research Institutions Prominence Index	Measures the prominence and standing of private and public research institutions	World Economic Forum calculations based on SCImago



Table 8 (continued)

Component	Definition	Source
Buyer sophistication	Response to the survey question "In your country, on what basis do buyers make purchasing decisions?" [1 = based solely on the lowest price; 7 = based on sophisticated performance attributes]	World Economic Forum, Executive Opinion Survey
Trademark applications	Number of trademark applications per million population	World Intellectual Property Organization, WIPO statistics database



UNCORRECTED PROOF

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Table 9 Definition of variables

Variable	Measurement	Source
Internationalization	An entropy index defined by Hitt et al. (1997)	Thomson Reuters Eikon
Environmental policies	This represents the percentage of environmental policies that a firm adopts out of the total number of policies considered	Thomson Reuters Eikon
Organizational innovation	Yearly R&D expenditures divided by yearly sales revenue	Thomson Reuters Eikon
Institutional innovation	This represents an index composed of ten innovation dimensions	WEF Global Competitive Report
GDP per capita	GDP is expressed in current U.S. dollars per person. Data are derived by first converting GDP in national currency to the U.S. dollars and then dividing it by total population	The World Economic Outlook database
Firm size	The natural logarithm of the total revenue of sales	Thomson Reuters Eikon
Firm age	This is measured as the number of years between the foundation of the firm and the observation year	Thomson Reuters Eikon
Ownership	Dummy variable: 1 stands for state-owned enterprise, and 0 otherwise	Thomson Reuters Eikon
Financial slack	This is measured as an assets-to-liabilities ratio	Thomson Reuters Eikon
Firm industry	Dummy variable for each sector: industrial; communication services; consumer discretionary; consumer staples; financial, energy; healthcare, information technology; materials; real estate; and utilities	Thomson Reuters Eikon
Firm financial performance	Return on equity	Thomson Reuters Eikon



640 **Acknowledgements** This research has been funded by the projects granted by the Department of Economic Transformation, Industry, Knowledge, and Universities (Regional Government of Andalusia):
641 P20_00019; B-SEJ-398-UGR20. Additionally, this research has received funding from Spanish Ministry
642 of Science and Innovation (Research Grant PID2019-106725GB-I00) and the Excellence Unit “Advanced
643 Research in Economics and Business” of the University of Granada (Spain), UCE2018.02_2021-07. We
644 thank the anonymous reviewers and members of the ISDE research group (SEJ-481, University of Granada)
645 for their insightful comments and suggestions to improve the quality of this research paper. We also
646 thank the research support program of the Faculty of Economics and Business Administration, University
647 of Granada (Spain), 2022.
648

649 References

- 650 Abdelzaher, D., & Newburry, W. (2016). Do green policies build green reputations? *Journal of Global*
651 *Responsibility*, 7(2), 226–246.
- 652 Aguilera-Caracuel, J., & Ortiz-de-Mandojana, N. (2013). Green innovation and financial performance: An institutional approach. *Organization & Environment*, 26(4), 365–385.
- 653 Aguilera-Caracuel, J., Hurtado-Torres, N. E., Aragón-Correa, J. A., & Rugman, A. M. (2013). Differentiated effects of formal and informal institutional distance between countries on the environmental performance of multinational enterprises. *Journal of Business Research*, 66(12), 2657–2665.
- 654 Aragón-Correa, J. A. (1998). Strategic proactivity and firm approach to the natural environment. *Academy of Management Journal*, 41(5), 556–567.
- 655 Attig, N., Boubakri, N., El Ghouli, S., & Guedhami, O. (2016). Firm internationalization and corporate social responsibility. *Journal of Business Ethics*, 134(2), 171–197.
- 656 Audia, P. G., & Greve, H. R. (2006). Less likely to fail: Low performance, firm size, and factory expansion in the shipbuilding industry. *Management Science*, 52(1), 83–94.
- 657 Babia, K., & Trendafilova, S. (2011). CSR and environmental responsibility: Motives and pressures to adopt green management practices. *Corporate Social Responsibility and Environmental Management*, 18(1), 11–24.
- 658 Bai, T., Chen, S., & He, X. (2019). How home-country political connections influence the internationalization of service firms. *Management International Review*, 59(4), 541–560.
- 659 Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717–736.
- 660 Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143.
- 661 Branco, M. C., Delgado, C., & Turker, D. (2019). Liability of foreignness and anti-corruption reporting in an emerging market: The case of Turkish listed companies. *Journal of Cleaner Production*, 232, 118–126.
- 662 Brandl, J., & Bullinger, B. (2009). Reflections on the societal conditions for the pervasiveness of entrepreneurial behavior in Western societies. *Journal of Management Inquiry*, 18(2), 159–173.
- 663 Breitbarth, T., Harris, P., & Aitken, R. (2009). Corporate social responsibility in the European Union: A new trade barrier? *Journal of Public Affairs*, 9(4), 239–255.
- 664 Campbell, J. T., Eden, L., & Miller, S. R. (2012). Multinationals and corporate social responsibility in host countries: Does distance matter? *Journal of International Business Studies*, 43(1), 84–106.
- 665 Cardascia, S., Robertson, S., Zhang, Q. (2020). Prioritize Nature in Asia-Pacific’s COVID-19 Recovery. Retrieved from <https://blogs.adb.org/blog/prioritize-nature-asia-pacific-s-covid-19-recovery>
- 666 Carneiro, J., Bamiatzis, V., & Cavusgil, S. T. (2018). Organizational slack as an enabler of internationalization: The case of large Brazilian firms. *International Business Review*, 27(5), 1057–1064.
- 667 Carpenter, M. A., & Fredrickson, J. W. (2001). Top management teams, global strategic posture, and the moderating role of uncertainty. *Academy of Management Journal*, 44(3), 533–545.
- 668 Chen, P. H., Ong, C. F., & Hsu, S. C. (2016a). Understanding the relationships between environmental management practices and financial performances of multinational construction firms. *Journal of Cleaner Production*, 139, 750–760.
- 669



Reporting of environmental policies and internationalization...

- 691 Chen, P. H., Ong, C. F., & Hsu, S. C. (2016b). The linkages between internationalization and environmen-
692 tal strategies of multinational construction firms. *Journal of Cleaner Production*, 116, 207–216.
- 693 Chen, S., & Tan, H. (2012). Region effects in the internationalization–performance relationship in Chi-
694 nese firms. *Journal of World Business*, 47(1), 73–80.
- 695 Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strat-
696 egic Management Journal*, 35(1), 1–23.
- 697 Child, J., & Tsai, T. (2005). The dynamic between firms' environmental strategies and institutional con-
698 straints in emerging economies: Evidence from China and Taiwan. *Journal of Management Stud-
699 ies*, 42(1), 95–125.
- 700 Christmann, P. (2004). Multinational companies and the natural environment: Determinants of global
701 environmental policy. *Academy of Management Journal*, 47(5), 747–760.
- 702 D'Angelo, A., Majocchi, A., & Buck, T. (2016). External managers, family ownership and the scope of
703 SME internationalization. *Journal of World Business*, 51(4), 534–547.
- 704 Dadush, U. (2013). *Incentives to attract FDI, foreign direct investment as a key driver for trade, growth
705 and prosperity: The case for a multilateral agreement on investment*. World Economic Forum.
- 706 Delgado-Márquez, B. L., & Pedaug, L. E. (2017). Environmental behavior and MNEs: A strategy pulled
707 by stakeholder engagement. *Business Strategy and the Environment*, 26(7), 927–939.
- 708 Dhull, S., & Narwal, M. (2016). Drivers and barriers in green supply chain management adaptation: A
709 state-of-art review. *Uncertain Supply Chain Management*, 4(1), 61–76.
- 710 Dowell, G., Hart, S., & Yeung, B. (2000). Do corporate global environmental standards create or destroy
711 market value? *Management Science*, 46(8), 1059–1074.
- 712 Du, J., & Zhou, C. (2019). Does guanxi matter in the foreign expansion of Chinese manufacturing firms?
713 The mediator role of linking and leveraging. *Asia Pacific Journal of Management*, 36(2), 473–497.
- 714 Duque-Grisales, E., Aguilera-Caracuel, J., Guerrero-Villegas, J., & García-Sánchez, E. (2020a). Can pro-
715 active environmental strategy improve Multilatinas' level of internationalization? The moderating
716 role of board independence. *Business Strategy and the Environment*, 29(1), 291–305.
- 717 Duque-Grisales, E., Aguilera-Caracuel, J., Guerrero-Villegas, J., & García-Sánchez, E. (2020b). Does
718 green innovation affect the financial performance of Multilatinas? The moderating role of ISO
719 14001 and R&D investment. *Business Strategy and the Environment*, 21, 1–7.
- 720 Eddleston, K. A., Jaskiewicz, P., & Wright, M. (2020). Family firms and internationalization in the
721 Asia-Pacific: The need for multi-level perspectives. *Asia Pacific Journal of Management*, 37(2),
722 345–361.
- 723 Ellimäki, P., Gómez-Bolaños, E., Hurtado-Torres, N., & Aragón-Correa, J. A. (2021). Do global firms
724 increase their environmental disclosure and performance? Symbolic versus effective operations
725 and the moderating role of liability of origin Legitimation Implications. *Industrial Marketing
726 Management*, 92, 354–363.
- 727 ESCAP: Economic and Social Commission for Asia and the Pacific. (2021). A sustainable energy
728 future-the Asia-Pacific region's journal to 2030. Retrieved from [https://www.unescap.org/blog/
729 sustainable-energy-future-asia-pacific-regions-journey-2030#](https://www.unescap.org/blog/sustainable-energy-future-asia-pacific-regions-journey-2030#).
- 730 ESCAP: Economic and Social Commission for Asia and the Pacific. (2021). Toward Sustainable
731 E-waste Management in Asia and the Pacific. ESCAP.
- 732 ESCAP: Economic and Social Commission for Asia and the Pacific (2020). New UN initiative to
733 reduce plastic pollution from ASEAN cities. Retrieved from [https://www.unescap.org/news/
734 new-un-initiative-reduce-plastic-pollution-asean-cities#](https://www.unescap.org/news/new-un-initiative-reduce-plastic-pollution-asean-cities#).
- 735 ESCAP: Economic and Social Commission for Asia and the Pacific. (2018). *Key environment issues,
736 trends and challenges in the Asia-Pacific region*. United Nations.
- 737 Fiaschi, D., Giuliani, E., & Nieri, F. (2017). Overcoming the liability of origin by doing no-harm:
738 Emerging country firms' social irresponsibility as they go global. *Journal of World Business*,
739 52(4), 546–563.
- 740 Forcadell, F. J., & Aracil, E. (2019). Can multinational companies foster institutional change and sus-
741 tainable development in emerging countries? A case study. *Business Strategy & Development*,
742 2(2), 91–105.
- 743 Friedman, F. B. (1992). *Practical guide to environmental management*. Environmental Law Institute.
- 744 Gallego-Álvarez, I. (2018). Assessing corporate environmental issues in international companies: A
745 study of explanatory factors. *Business Strategy and the Environment*, 27(8), 1284–1294.
- 746 Gomes, L., & Ramaswamy, K. (1999). An empirical examination of the form of the relationship
747 between multinationality and performance. *Journal of International Business Studies*, 30(1),
748 173–187.



- 749 Gómez-Bolaños, E., Hurtado-Torres, N. E., & Delgado-Márquez, B. L. (2020). Disentangling the
750 influence of internationalization on sustainability development: Evidence from the energy sector.
751 *Business Strategy and the Environment*, 29(1), 229–239.
- 752 Gomez-Mejia, L. R., Makri, M., & Kintana, M. L. (2010). Diversification decisions in family-con-
753 trolled firms. *Journal of Management Studies*, 47(2), 223–252.
- 754 González-Benito, J., & González-Benito, Ó. (2005). Environmental proactivity and business perfor-
755 mance: An empirical analysis. *Omega*, 33(1), 1–15.
- 756 González-Benito, J., & González-Benito, Ó. (2006). A review of determinant factors of environmental
757 proactivity. *Business Strategy and the Environment*, 15(2), 87–102.
- 758 Haider, S. (2011). *Environmental management system ISO 14001: 2004: Handbook of transition*.
759 CRC Press.
- 760 Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Multivariate data*
761 *analysis*. Bookman.
- 762 Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4),
763 986–1014.
- 764 Hartmann, J., & Uhlenbruck, K. (2015). National institutional antecedents to corporate environmental
765 performance. *Journal of World Business*, 50(4), 729–741.
- 766 Hartmann, J., & Vachon, S. (2018). Linking environmental management to environmental perfor-
767 mance: The interactive role of industry context. *Business Strategy and the Environment*, 27(3),
768 359–374.
- 769 Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the
770 case of corporate social responsibility. *Strategic Management Journal*, 37(13), 2569–2588.
- 771 Henriques, I., & Sadosky, P. (1999). The relationship between environmental commitment and manage-
772 rial perceptions of stakeholder importance. *Academy of Management Journal*, 42(1), 87–99.
- 773 Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and
774 firm performance in product-diversified firms. *Academy of Management Journal*, 40(4), 767–798.
- 775 Huang, Y. C., & Chen, C. T. (2022). Exploring institutional pressures, firm green slack, green product
776 innovation and green new product success: Evidence from Taiwan's high-tech industries. *Techno-*
777 *logical Forecasting and Social Change*, 174, 121196.
- 778 Jain, R., & Krishnapriya, V. S. (2020). Effect of innovation on corporate social responsibility: does own-
779 ership matter? Evidence from Indian manufacturing firms. *Economics of Innovation and New Tech-*
780 *nology*, 15, 1–22.
- 781 Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm: A model of knowledge
782 development and increasing foreign market commitments. *Journal of International Business Stud-*
783 *ies*, 8(1), 23–32.
- 784 Khedhaouria, A., & Thurik, R. (2017). Configurational conditions of national innovation capability: A
785 fuzzy set analysis approach. *Technological Forecasting and Social Change*, 120, 48–58.
- 786 Koseoglu, M. A., Uyar, A., Kilic, M., Kuzey, C., & Karaman, A. S. (2021). Exploring the connections
787 among CSR performance, reporting, and external assurance: Evidence from the hospitality and
788 tourism industry. *International Journal of Hospitality Management*, 94, 102819.
- 789 Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of
790 the multinational enterprise. *Academy of Management Review*, 24(1), 64–81.
- 791 Kostova, T., Roth, K., & Dacin, M. T. (2008). Institutional theory in the study of multinational corpora-
792 tions: A critique and new directions. *The Academy of Management Review*, 33(4), 994–1006.
- 793 Krist, M. (2009). *Internationalization and Firm performance*. Gabler Verlag.
- 794 Kwakwa, P. A., Alhassan, H., & Aboagye, S. (2018). Environmental Kuznets curve hypothesis in a finan-
795 cial development and natural resource extraction context: Evidence from Tunisia. *Quantitative*
796 *Finance and Economics*, 2(4), 981–1000.
- 797 Lane, J. (2014). *Globalization: Interdependencies and coordination*. Routledge.
- 798 Lee, J. D., & Heshmati, A. (2009). *Productivity, efficiency, and economic growth in the Asia-Pacific*
799 *region*. Physica-Verlag.
- 800 Institute, L. (2018). *The 2018 legatum prosperity index report*. Legatum Institute.
- 801 Leyva-de la Hiz, D. I., Hurtado-Torres, N., & Bermúdez-Edo, M. (2019). The heterogeneity of levels of
802 green innovation by firms in international contexts: A study based on the home-country institu-
803 tional profile. *Organization & Environment*, 32(4), 508–527.
- 804 Li, Z., Liao, G., & Albitar, K. (2019). Does corporate environmental responsibility engagement affect
805 firm value? The mediating role of corporate innovation. *Business Strategy and the Environment*,
806 29(3), 1045–1055.



Reporting of environmental policies and internationalization...

- 807 Lin, C. Y. Y., & Liu, F. C. (2012). A cross-level analysis of organizational creativity climate and perceived innovation: The mediating effect of work motivation. *European Journal of Innovation Management*, 15(1), 55–76.
- 808
- 809
- 810 Liu, M., Marshall, A., & McColgan, P. (2018). Overcoming the liability of foreignness in foreign direct investments: The role of corporate social responsibility. Financial Management Association, Retrieved from http://fmaconferences.org/SanDiego/Papers/CSR_FDI_v_2_5.pdf.
- 811
- 812
- 813 Madhok, A., & Keyhani, M. (2012). Acquisitions as entrepreneurship: Asymmetries, opportunities, and the internationalization of multinationals from emerging economies. *Global Strategy Journal*, 2(1), 26–40.
- 814
- 815
- 816 Marano, V., & Kostova, T. (2016). Unpacking the institutional complexity in adoption of CSR practices in multinational enterprises. *Journal of Management Studies*, 53(1), 28–54.
- 817
- 818 Martín-Tapia, I., Aragón-Correa, J. A., & Rueda-Manzanares, A. (2010). Environmental strategy and exports in medium, small and micro-enterprises. *Journal of World Business*, 55(3), 266–275.
- 819
- 820 Martín-Tapia, I., Aragon-Correa, J. A., & Senise-Barrio, M. E. (2008). Being green and export intensity of SMEs: The moderating influence of perceived uncertainty. *Ecological Economics*, 68(1–2), 56–67.
- 821
- 822
- 823 Meng, X., Zeng, S., Xie, X., & Zou, H. (2019). Beyond symbolic and substantive: Strategic disclosure of corporate environmental information in China. *Business Strategy and the Environment*, 28(2), 403–417.
- 824
- 825
- 826 Meyer, M., Buber, R., & Aghamanoukjan, A. (2013). In search of legitimacy: Managerialism and legitimation in civil society organizations. *VOLUNTAS: International Journal of Voluntary and Non-profit Organizations*, 24(1), 167–193.
- 827
- 828
- 829 Miller, S. R., Thomas, D. E., Eden, L., & Hitt, M. (2008). Knee deep in the big muddy: The survival of emerging market firms in developed markets. *Management International Review*, 48(6), 645–666.
- 830
- 831 Mishina, Y., Pollock, T. G., & Porac, J. F. (2004). Are more resources always better for growth? Resource stickiness in market and product expansion. *Strategic Management Journal*, 25(12), 1179–1197.
- 832
- 833 Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. The Belknap Press.
- 834
- 835 Nelson, R. R., & Rosenberg, N. (1993). Technical innovation and national systems. *National Innovation Systems*, 1, 3–21.
- 836
- 837 Noailly, J., & Ryfisch, D. (2015). Multinational firms and the internationalization of green R&D: A review of the evidence and policy implications. *Energy Policy*, 83, 218–228.
- 838
- 839 North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.
- 840
- 841 OECD. (2021). Key findings from the update of the OECD Green Recovery Database. Recovered from <https://www.oecd.org/coronavirus/policy-responses/key-findings-from-the-update-of-the-oecd-green-recovery-database-55b8abba/>.
- 842
- 843
- 844 Oesterle, M. J., Richta, H. N., & Fisch, J. H. (2013). The influence of ownership structure on internationalization. *International Business Review*, 22(1), 187–201.
- 845
- 846 Ortas, E., Gallego-Álvarez, I., & Álvarez, I. (2019). National institutions, stakeholder engagement, and firms' environmental, social, and governance performance. *Corporate Social Responsibility and Environmental Management*, 26(3), 598–611.
- 847
- 848
- 849 Ortiz-de-Mandojana, N., Aguilera-Caracuel, J., de la Torre-Ruiz, J., & Ferrón-Vílchez, V. (2011). *Can national innovation substitute the role of environmental regulation to improve corporate environmental performance?*. FEG working paper series 05/11. Faculty of Economics and Business, University of Granada.
- 850
- 851
- 852
- 853 Pérez-Cornejo, C., de Quevedo-Puente, E., & Delgado-García, J. B. (2019). How to manage corporate reputation? The effect of enterprise risk management systems and audit committees on corporate reputation. *European Management Journal*, 37(4), 505–515.
- 854
- 855
- 856 Polonsky, M. J., Zeffane, R. M., & Medley, P. (1992). Corporate environmental commitment in Australia: A sectorial approach. *Business Strategy and the Environment*, 1(2), 25–40.
- 857
- 858 Purkayastha, S., Kumar, V., & Lu, J. W. (2017). Business group heterogeneity and the internationalization-performance relationship: Evidence from Indian business groups. *Asia Pacific Journal of Management*, 34(2), 247–279.
- 859
- 860
- 861 Rahman, M., Aziz, S., & Hughes, M. (2020). The product-market performance benefits of environmental policy: Why customer awareness and firm innovativeness matter. *Business Strategy and the Environment*, 29(5), 1–18.
- 862
- 863



- 864 Ramus, C. A., & Montiel, I. (2005). When are corporate environmental policies a form of greenwash-
865 ing? *Business & Society*, 44(4), 377–414.
- 866 Raziq, M. M., Benito, G. R., & Ahmad, M. (2021). Institutional distance and MNE-subsidiary ini-
867 tiative collaboration: The role of dual embeddedness. *European Management Review*, 18(3),
868 311–328.
- 869 Refinitiv. (2019). Financing a sustainable future in Asia. <https://www.refinitiv.com/en/resources/special-report/financing-a-sustainable-future-in-asia>.
- 870 Refinitiv. (2020). Financing a sustainable future in Australia. <https://www.refinitiv.com/en/media-center/press-releases/2020/june/australian-companies-fall-short-on-esg-according-to-new-refinitiv-report>.
- 871
872
873
- 874 Rubera, G., & Kirca, A. H. (2012). Firm innovativeness and its performance outcomes: A meta-analytic
875 review and theoretical integration. *Journal of Marketing*, 76(3), 130–147.
- 876 Rugman, A. M., & Verbeke, A. (2004). A perspective on regional and global strategies of multinational
877 enterprises. *Journal of International Business Studies*, 35(1), 3–18.
- 878 Sandhu, S., Smallman, C., Ozanne, L. K., & Cullen, R. (2012). Corporate environmental responsiveness
879 in India: Lessons from a developing country. *Journal of Cleaner Production*, 35, 203–213.
- 880 Shah, K. U., Arjoon, S., & Rambocas, M. (2016). Aligning corporate social responsibility with green
881 economy development pathways in developing countries. *Sustainable Development*, 24(4),
882 237–253.
- 883 Sheldon, C. (2017). *ISO 14001 and beyond: Environmental management systems in the real world*.
884 Routledge.
- 885 Shen, R., Tang, Y., & Zhang, Y. (2016). Does firm innovation affect corporate social responsibility?.
886 Harvard Business School working paper, No. 16-096. <http://dx.doi.org/https://doi.org/10.2139/ssrn.2807438>
- 887
- 888 Srivastava, M., Moser, R., & de Meijer, T. (2015). Internationalization and performance in European
889 market: An Asian perspective. *International Business Research*, 8(4), 122–138.
- 890 Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of
891 Management Review*, 20(3), 571–610.
- 892 Symeou, P. C., Zyglidopoulos, S., & Gardberg, N. A. (2019). Corporate environmental performance:
893 Revisiting the role of organizational slack. *Journal of Business Research*, 96, 169–182.
- 894 Tajvidi, M., & Karami, A. (2015). *Product development strategy: Innovation capacity and entrepreneurial
895 firm performance in high-tech SMEs*. Palgrave Macmillan.
- 896 Tan, Q., & Sousa, C. M. (2019). Why poor performance is not enough for a foreign exit: The impor-
897 tance of innovation capability and international experience. *Management International Review*,
898 59(3), 465–498.
- 899 Tatoglu, E., Bayraktar, E., & Arda, O. A. (2015). Adoption of corporate environmental policies in
900 Turkey. *Journal of Cleaner Production*, 91, 313–326.
- 901 Udomkit, N. (2017). Networking strategies in Asia Pacific. In N. Thirawat (Ed.), *Internationalization
902 and managing networks in the Asia Pacific*. Elsevier.
- 903 Welford, R. (2013). *Corporate environmental management 1: Systems and strategies*. Routledge.
- 904 World Economic Forum. (2018). *The global competitiveness report*. World Economic Forum.
- 905 Ye, M., Lu, W., & Xue, F. (2022). Impact of institutional distance on environmental and social prac-
906 tices in host countries: Evidence from international construction companies. *Journal of Con-
907 struction Engineering and Management*, 148, 04021189.
- 908 Zhu, Q., Sarkis, J., & Lai, K. H. (2012). Internationalization and environmentally-related organiza-
909 tional learning among Chinese manufacturers. *Technological Forecasting and Social Change*,
910 79(1), 142–154.

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Reporting of environmental policies and internationalization...

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