

# The Effects of Institutional Distance and Headquarters' Financial Performance on the Generation of Environmental Standards in Multinational Companies

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**Abstract** This article combines institutional and resources' arguments to show that the institutional distance between the home and the host country, and the headquarters' financial performance have a relevant impact on the environmental standardization decision in multinational companies. Using a sample of 135 multinational companies in three different industries with headquarters and subsidiaries based in the USA, Canada, Mexico, France, and Spain, we find that a high environmental institutional distance between headquarters' and subsidiaries' countries deters the standardization of environmental practices. On the other hand, high-profit headquarters are willing to standardize their environmental practices, rather than taking advantage of countries with lax environmental protection to undertake more pollution-intensive activities. Finally, we show that headquarters' financial performance also imposes a moderating effect on the relationship between environmental institutional distance between countries and environmental standardization within the multinational company.

**Keywords** Natural environment · Multinational company · Environmental standardization · Environmental institutional distance between countries · Financial performance

<b>Abbreviations</b>	34	
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	35
EPER	European Pollutant Emission Register	36
ESI	Environmental Sustainability Index	37
EU	European Union	38
MNC	Multinational Company	39
NPRI	National Pollution Release Inventory	40
RETC	Registro de Emisiones y Transferencia de Contaminantes	41
RQ	Reportable Quantities	42
NAFTA	The North American Free Trade Agreement	43
TRI	Toxic Release Inventory	44
VIF	Variance inflation factors	45

## Introduction 48

Globalization and information technology are contributing to reinforcing the expansion of multinational companies (MNCs) in the world (Dowell et al. 2000). This development uses a complex internal structure of units (headquarters and subsidiaries) based in countries with different institutional profiles (Kostova and Roth 2002). These differences generate managerial doubts about how MNCs deal with business issues.

The MNCs' approach to the natural environment is one of the most controversial (Kolk and Pinkse 2008). Due to most environmental regulations still being developed at the level of nation states (Kolk and Van Tulder 2010; Rugman

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61 and Verbeke 1998a), international environmental literature  
 62 has mainly focused on analyzing whether headquarters' or  
 63 subsidiaries' countries' environmental regulations may  
 64 influence the MNCs' corporate environmental practices  
 65 (e.g., Christmann 2004; Scholtens and Dam 2007; Rugman  
 66 and Verbeke 1998a, b). Results have not been definitive.  
 67 When some studies have suggested that MNCs have  
 68 competitive incentives to develop a standardized approach  
 69 in the whole network using the headquarters' regulation  
 70 which is usually more stringent (Christmann and Taylor  
 71 2001; Porter and van der Linde 1995; Rappaport and  
 72 Flaherty 1992), others have suggested that MNCs find  
 73 more advantages in locating dirty operations through  
 74 subsidiaries in countries with lax environmental regula-  
 75 tions (e.g., Leonard 1988; Stewart 1993; Vernon 1992).

76 However, countries' institutional profile is very complex  
 77 and is not merely defined by the regulatory element. In fact,  
 78 MNCs may confront a multitude of different and possible  
 79 conflicting institutional pressures (e.g., Kostova 1999;  
 80 Kostova et al. 2008). It has been shown that headquarters  
 81 and subsidiaries have strong incentives and pressures to  
 82 conform to countries' institutional profiles (e.g., Ang and  
 83 Massingham 2007; Kostova and Roth 2002). For this rea-  
 84 son, we expect that the environmental institutional distance  
 85 between headquarters and subsidiaries' countries might be  
 86 more relevant than the self-regulation of each country in  
 87 deciding whether environmental standardization is finally  
 88 implemented within the MNC.

89 However, even when institutional distance is high,  
 90 managers of MNCs may also find a more homogeneous  
 91 approach of environmental issues attractive to reinforce the  
 92 firm's international legitimacy (Bansal 2005; Kostova et al.  
 93 2008), transparency, reputation (Christmann 2004), and  
 94 internal coherence (e.g., Christmann and Taylor 2006).  
 95 Further, these firms may transfer valuable knowledge at  
 96 very low cost to the rest of the units (Bartlett and Ghoshal  
 97 1989). Consequently, we also highlight that high-profit  
 98 headquarters may be more willing to create stringent  
 99 environmental standards and moderate the negative influ-  
 100 ence of institutional distance between the home and the  
 101 host country on the adoption of an environmentally stan-  
 102 dardized approach.

103 We use different sources of information to obtain  
 104 environmental and financial data of a sample integrating  
 105 135 MNCs from three industries with headquarters and  
 106 subsidiaries based in the USA, Canada, Mexico, France  
 107 and Spain. Using a hierarchical moderated regression  
 108 analysis we answer two research questions. Firstly, we  
 109 analyze whether the environmental institutional distance  
 110 between the headquarters' and subsidiaries' countries  
 111 influences the environmental standardization decision  
 112 within the MNC. Secondly, we study whether headquar-  
 113 ters' financial performance positively contributes to

adopting stringent environmental standards and reducing  
 the institutional distance's effect on the environmental  
 standardization decision within MNCs.

From an institutional perspective, firms have to operate  
 within a social and institutional framework of norms and  
 values in order to reinforce their legitimacy (Kostova and  
 Zaheer 1999; Kostova et al. 2008). On the other hand, a  
 resource-based view of strategic management examines the  
 internal resources and capabilities of firms that enable them  
 to generate above-normal rates of return and a sustainable  
 competitive advantage (Barney 1991; Oliver 1997). While  
 previous literature has mostly used external (institutional)  
 or internal (resource) arguments to explain the environ-  
 mental approaches of MNCs in different locations (Darnall  
 et al. 2008), we are using here an integrated view of the  
 institutional and the resource-based view. This approach  
 answers calls from literature for empirical works using an  
 integrated approach of both perspectives (e.g., Aragón-  
 Correa and Sharma 2003; Darnall et al. 2008).

This article proceeds in the following manner. The next  
 section addresses the theoretical arguments that explain the  
 environmental standardization decision in MNCs, combin-  
 ing both the institutional and the resource-based view.  
 In the third section, we develop our hypotheses. The fourth  
 and fifth sections include the methodology and results,  
 respectively. The final section refers to the discussion,  
 limitations, and future research.

## MNCs Under the Institutional Theory and Resource-Based View

Multinational companies are based in different countries  
 with their own institutional profiles and need to gain  
 legitimacy in all the contexts in which they operate  
 (Kostova and Zaheer 1999). Furthermore, these firms can  
 generate a set of valuable resources and capabilities, which  
 are sources of competitive advantage, that can be trans-  
 ferred within their internal network (Bartlett and Ghoshal  
 1989). Therefore, both the institutional and resource-based  
 views can contribute to explaining the MNCs' existence.

Institutional theorists are especially interested in how  
 organizational structures and processes become institu-  
 tionalized over time (Oliver 1997). The basic premise of  
 this theory is that firms' tendencies toward conformity with  
 predominant norms and traditions in each social context  
 lead to homogeneity among firms in their structures and  
 activities, and that successful firms are those that gain  
 support and legitimacy by conforming to social pressures  
 (Meyer and Rowan 1977; Oliver 1997).

Within this research area, scholars have stressed the  
 importance of external legitimization (e.g., Bansal and  
 Hunter 2003; DiMaggio and Powell 1983; Oliver 1991)

164 and its relationship with creating opportunities for organi- 217  
 165 zations to access resources that contribute to their long- 218  
 166 term viability (Meyer and Rowan 1977). Since it is vital for 219  
 167 the MNC to achieve legitimacy in all its environments, it 220  
 168 will experience the pressure to adapt their practices to the 221  
 169 local institutional context (Kostova and Roth 2002). 222  
 170 However, due to the globalization process, these organi- 223  
 171 zations also need to pursue an international institutional 224  
 172 legitimacy, increase their transparency, and unify their 225  
 173 management conduct (Kostova et al. 2008; Kostova and 226  
 174 Zaheer 1999). In this context, legitimacy should be deter- 227  
 175 mined beyond the firm's boundaries, but within the broader 228  
 176 community of which the firm is a part (Hoffman 1997, 229  
 177 1999). 230

178 We distinguish two types of institutional pressures that 231  
 179 clearly condition the MNCs' activities. First, at the inter- 232  
 180 organizational level, institutional pressures arise from 233  
 181 external sources such as governments, markets and society 234  
 182 (e.g., constituency groups and industry associations) 235  
 183 (Hoffman 2001). Second, at the organizational level, 236  
 184 institutional pressures arise from the culture, shared belief 237  
 185 systems and political processes (DiMaggio and Powell 238  
 186 1983), and shareholders (e.g., Henriques and Sadorsky 239  
 187 1996, 1999). All these institutional actors can impose dif- 240  
 188 ferent coercive, mimetic and normative pressures on 241  
 189 managers. Whereas coercive pressures are authoritative 242  
 190 forces imposed primarily by government mandate or threat 243  
 191 of mandate (Oliver 1991), mimetic pressures occur through 244  
 192 organizational imitation or modelling of norms or practices 245  
 193 in the organization's institutional field. Finally, normative 246  
 194 pressures have their origins in the professionalization of 247  
 195 industry or sector members who attempt to define the 248  
 196 conditions and methods of their work to legitimate their 249  
 197 professional autonomy (Oliver 1997). 250

198 The resource-based view requires analysis of the firm's 251  
 199 internal resources and capabilities as sources of competi- 252  
 200 tive advantage. According to this approach, it is the rational 253  
 201 identification and use of resources that are valuable, rare, 254  
 202 difficult to copy, and non-substitutable that lead to endur- 255  
 203 ing firm variation and supernormal profits (Barney 1991), 256  
 204 independent of the specific institutional context (Oliver 257  
 205 1997). Thus, MNCs can be cost-effective exploiting their 258  
 206 resources and capabilities, and transferring them within the 259  
 207 rest of their organizational units (Bartlett and Ghosal 260  
 208 1989). Under the natural resource-based view, firms need 261  
 209 to generate a set of valuable green resources and capabil- 262  
 210 ities in order to achieve sustainable competitive advantage 263  
 211 and simultaneously develop a socially responsible attitude 264  
 212 (e.g., Aragón-Correa 1998; Christmann 2000; Hart 1995; 265  
 213 Majumdar and Marcus 2001; Russo and Fouts 1997; 266  
 214 Sharma and Vredenburg 1998; Shrivastava 1995). It has  
 215 been argued that an organization's complementary  
 216 resources and capabilities may facilitate the adoption of

advanced environmental management practices. Conse-  
 quently, a resource or capability can be considered com-  
 plementary to adoption of proactive environmental  
strategies as it may assist the adoption process (Darnall and  
Edwards 2006) and reinforce the development of dynamic  
capabilities of the firm (Aragón-Correa and Sharma 2003).

Thus, we can argue that both institutional pressures, and  
resources and capabilities definitely contribute to explain-  
ing how MNCs can develop environmental resources and  
capabilities that can be transferred within their internal  
network. Consequently, we can provide evidence about the  
extent to which these organizations are driven to adopt  
advanced and standardized environmental management  
practices worldwide, mainly because of external institu-  
tional pressures or their internal set of resources and  
capabilities, or a combination of both.

### Environmental Standardization Decision Within MNCs

Standardization can be associated with the generic term  
'unification', allowing a reduction of organizational com-  
plexity (Köhl et al. 2000; Manrodt and Vitasek 2004). The  
decision whether to standardize operations in international  
business is very relevant because it influences the firm's  
fundamental approach to business and how it competes  
(Ang and Massingham 2007). Previous research suggests  
that the decision hinges on whether there are pressures for  
cost reduction (standardization) versus pressures for market  
responsiveness (adaptation) (e.g., Bartlett and Ghosal  
1989).

Most previous international literature analyzing whether  
standardization or adaptation is useful has used a marketing  
or human resource approach (Ang and Massingham 2007;  
Szulanski and Jensen 2006). It has been shown that both  
human resource and marketing practices have been found  
to vary widely within firms across national boundaries  
(Robert et al. 2000). However, corporate environmental  
practices have a set of their own peculiarities that cannot be  
extended to other practices. In fact, environmental policies  
and practices have a strong influence on the international  
reputation (Dowell et al. 2000) and legitimacy (Bansal  
2005) of the firm, are highly regulated (Rugman and Ver-  
beke 1998a, b), and are not necessarily visible to con-  
sumers (Christmann 2004).

Increasingly, firms implement social and environmental  
standards as instruments towards corporate social respon-  
sibility in supply chains (Mueller et al. 2009). Environ-  
mental standardization strategy implies that the MNC  
self-regulates its environmental conduct, which means that  
there is a firm's commitment to control its own conduct  
beyond what is required by the law through voluntary  
environmental initiatives (Christmann and Taylor 2002,

267 2006). Hence, through the generation of environmental  
 268 standards, the MNC will be able to transfer their environ-  
 269 mental business model within their internal network,  
 270 independent of the countries where it operates (e.g.,  
 271 Christmann 2004). As a consequence, the firm will be more  
 272 willing to develop a socially (environmentally) responsible  
 273 attitude, protect the natural environment and contribute to  
 274 sustainable development. Furthermore, the MNC will be  
 275 able to integrate the society's concerns towards the natural  
 276 environment in its corporate strategy and improve simul-  
 277 taneously the quality of life in the different areas where it  
 278 operates.

279 The environmental standardization decision within  
 280 MNCs is initially costly since it requires a considerable  
 281 investment in environmental technologies and processes in  
 282 order to apply them in the different countries where they  
 283 operate (Christmann and Taylor 2001; Rondinelli and  
 284 Vastag 1996). Porter and van der Linde (1995) argue that  
 285 MNCs benefit from higher environmental standards in their  
 286 home market because such standards induce them to  
 287 develop superior environmental management capabilities,  
 288 which improve an MNC's international competitiveness  
 289 once environmental regulations are raised in other coun-  
 290 tries. However, this situation only happens when the home  
 291 government has sufficient foresight to anticipate the envi-  
 292 ronmental regulations of all other countries and the home  
 293 country is a very large, triad-based economy whose influ-  
 294 ence on the world economy is immense (Rugman and  
 295 Verbeke 1998a).

296 Globalization proponents state that lower barriers to  
 297 trade encourage firms to transfer environmental technolo-  
 298 gies from countries with stricter environmental standards to  
 299 developing countries, which lack access to environmental  
 300 technologies and capabilities (Drezner 2000). Other studies  
 301 have revealed that there are a variety of benefits resulting  
 302 from implementing homogeneous environmental manage-  
 303 ment systems within the organizational structure, such as  
 304 ISO 14001 or EMAS (e.g., Bansal and Hunter 2003). In  
 305 fact, firms can increase recycling activity as well as  
 306 reductions in air emissions, solid waste and energy usage.  
 307 In addition, some valuable but less easily quantifiable  
 308 benefits such as risk reduction and company image can be  
 309 obtained (e.g., Alberti et al. 2000; Beschoner and Müller  
 310 2007; Darnall 2006; Florida and Davison 2001; Potoski and  
 311 Prakash 2005). Nevertheless, Mohr (2006) shows that  
 312 environmental performance standards may offer a relative  
 313 disincentive for the adoption of cleaner technologies if  
 314 regulators cannot credibly commit to a stringent environ-  
 315 mental standard.

316 The creation of environmental standards can help firms  
 317 to gain legitimacy among critical stakeholders along the  
 318 supply chain (e.g., Cordano et al. 2010; Eiadat et al. 2008).  
 319 Indeed, involving stakeholders in the management process

is critical in order to minimize their eventual concerns and  
 enhance the strategic perspective of corporate social  
 responsibility (Miles et al. 2006; Plaza-Úbeda et al. 2010).  
 In the context of MNCs, Christmann (2004) shows that  
 perceived government pressures about the international  
 harmonization of environmental regulations contribute to  
 adoption of stringent global environmental standards; per-  
 ceived customer pressures contribute to standardization of  
 environmental communication; and perceived industry  
 pressures relate to standardization of operational environ-  
 mental policies. Thus, adopting environmental standards  
 would be consistent with pursuit of global competitive  
 strategies.

Environmental Institutional Distance Between 333  
 Countries and Environmental Standardization in MNCs 334

Arguments about the influence that the headquarters' or  
 subsidiaries' environmental regulatory dimension may  
 have on the environmental standardization strategy within  
 the MNC have been widely debated, the results being  
 varied. While some studies have suggested that MNCs  
 have competitive incentives to develop a standard approach  
 in the whole network using the headquarters' regulation  
 which is usually more stringent (e.g., Porter and van der  
 Linde 1995; Rappaport and Flaherty 1992), others have  
 suggested that MNCs find more advantages by locating  
 dirty operations through subsidiaries in countries with lax  
 environmental regulations (Stewart 1993). Nevertheless,  
 the home and host countries' environmental regulations by  
 themselves are not the only factor that affects the envi-  
 ronmental standardization strategy within MNCs. Indeed,  
 evidence suggests that even if formal environmental regu-  
 lations are identical across countries, de facto regulations  
 may differ as a result of differences in countries' capacities  
 to implement, monitor, and enforce regulations (Dasgupta  
 and Hettige 2000). Moreover, there are differences in  
 countries' capacities to tolerate, dilute, absorb or ignore  
 pollution, as well as differences in economic and envi-  
 ronmental priorities (Christmann and Taylor 2001). Con-  
 sequently, we propose that the institutional distance in  
 terms of environmental issues, and not the specific envi-  
 ronmental regulations in each country, will be more rele-  
 vant in deciding whether environmental standardization  
 strategy is finally implemented.

The literature distinguishes two different considerations  
 regarding the relationship between institutional distance  
 between countries and the MNC's standardization strategy.  
 On the one hand, it is shown that standardization of man-  
 agerial practices is easier between countries with similar  
 institutional structures. Indeed, a low institutional distance  
 may contribute to adjusting the legitimacy requirements of  
 a country that is institutionally similar to its home country

371 (Kostova and Zaheer 1999; Xu and Shenkar 2002). Ang  
372 and Massingham (2007) show that when the pressures for  
373 economies of scope are high and pressures for cultural  
374 responsiveness are low, the standardization decision is the  
375 most appropriate. Therefore, if the foreign markets are  
376 institutionally very distant, transferring strategic resources  
377 to and from those foreign subsidiaries becomes an arduous  
378 task (Kostova 1999; Chao and Kumar 2010). In this case,  
379 the MNC may decide to invest significant resources in  
380 overcoming the challenges of transfer, or it may decide not  
381 to integrate the particular foreign subsidiary located in the  
382 very distant host country with the rest of the organization.  
383 Finally, MNCs may be faced with agency costs attributable  
384 to opportunistic behavior on the part of managers and other  
385 local partners who are based in locations distant from the  
386 home country of the MNC (e.g., Buckley and Casson  
387 1998). These costs are likely to magnify when MNCs enter  
388 and commence operations in host countries with very dif-  
389 ferent regulative and normative institutional contexts (Eden  
390 and Miller 2004; Xu and Shenkar 2002). In sum, a high  
391 institutional distance between countries would create a  
392 liability of foreignness for firms doing business abroad  
393 (Orr and Scott 2008; Zaheer and Masakowski 1997).

394 On the other hand, another view suggests that countries'  
395 differences might drive creation of international standards  
396 within MNCs in order to unify their management rules  
397 (Christmann and Taylor 2006; Kostova et al. 2008). Thus,  
398 the MNC would tend to create its own internal institutional  
399 structure through homogeneous management models that  
400 justify the MNC's conduct worldwide, gaining transpar-  
401 ency, reputation (e.g., Christmann 2004; Dowell et al.  
402 2000) and reinforcing their international legitimacy in all  
403 the locations where they operate (Kostova et al. 2008).

404 Considering the scarce attention that has been paid to  
405 the influence of national environmental institutional profile  
406 beyond the cross-country analysis of headquarters' or  
407 subsidiaries' countries' environmental regulations, we  
408 expect that MNCs take advantage of the small environ-  
409 mental institutional distance effect between headquarters'  
410 and subsidiaries' countries in order to gain a good level of  
411 legitimacy easily (Kostova and Zaheer 1999) and to stan-  
412 dardize their environmental practices at a low cost.

413 **Hypothesis 1** The lower the environmental institutional  
414 distance between the headquarters' and subsidiaries'  
415 countries, the greater the environmental standardization  
416 within the MNC.

417 Headquarters' Financial Performance  
418 and Environmental Standardization in MNCs

419 Multinational companies that decide to implement envi-  
420 ronmental standards within their internal network need to

421 develop a set of green resources and capabilities that can be  
422 easily transferred within the MNC's internal network and  
423 that go beyond the compliance with national or interna-  
424 tional environmental regulations (Rugman and Verbeke  
425 1998a, b). As has been mentioned previously, this strategy  
426 initially requires a substantial investment in order to create  
427 and transfer environmental practices within the firm  
428 (Christmann and Taylor 2001). Therefore, headquarters'  
429 profitability may play an important role in the creation of  
430 environmental standards within MNCs.

431 Environmental management literature has paid special  
432 attention to the interactions between firms' financial and  
433 environmental performance (e.g., Hart and Ahuja 1996;  
434 Nehrt 1996; Smith 2003; Stanwick and Stanwick 1998).  
435 From an empirical point of view, a growing body of  
436 quantitative studies has tested the linkage between envi-  
437 ronmental proactivity and firm performance, the results  
438 being varied (Molina-Azorín et al. 2009). On the one hand,  
439 certain relevant studies show a direct and a positive rela-  
440 tionship between corporate environmental and financial  
441 performance (e.g., Hart 1995; Russo and Fouts 1997; Ruf  
442 et al. 2001). For instance, Hamilton (1995), White (1995),  
443 and Klassen and McLaughlin (1996) use event study  
444 methodology to demonstrate interesting findings. First,  
445 news of high levels of toxic emissions results in significant  
446 negative abnormal returns. Second, firms with strong  
447 environmental management practices have better stock  
448 price returns than firms with poor practices after a major  
449 environmental disaster. Third, environmental performance  
450 awards result in significant positive abnormal returns.

451 On the other hand, others do not identify a positive  
452 impact of environmental proactivity on financial perfor-  
453 mance (e.g., Cordeiro and Sarkis 1997; Gilley et al. 2000).  
454 Using a group of firms included in the Dow Jones Sus-  
455 tainability Index and Dow Jones Global Index, López et al.  
456 (2007) found that the effect of sustainability practices on  
457 performance indicators is negative during the first years in  
458 which they are applied. Finally, other studies reveal that the  
459 relationship between environmental and financial perfor-  
460 mance tends to be bidirectional and nearly simultaneous  
461 (Orlitzky et al. 2003).

462 In terms of this bidirectional relationship, prior corpo-  
463 rate financial performance may provide the slack resources  
464 necessary to engage in corporate social responsibility  
465 (Etzion 2007). Slack refers to the stock of excess resources  
466 available to an organization during a given planning cycle  
467 (Nohria and Gulati 1996). It can accrue as a result of  
468 organizational performance in prior periods, as a planned  
469 buffer, or as a result of poor planning (Voss et al. 2008).  
470 Environmental literature has shown that managers who  
471 have more discretionary financial slack at their disposal can  
472 better view environmental issues as opportunities, rather  
473 than as threats (Sharma 2000; Bansal 2005). In contrast,

474 when financial slack is low, other issues may dominate the  
475 mind-set of management, relegating environmental issues  
476 to lower priority (Henriques and Sadorsky 1996).

477 Thus, considering the relationship between financial and  
478 environmental performance and the scarce attention that  
479 has been paid to the effect that a high corporate financial  
480 performance may produce on the creation of environmental  
481 standards, it is highly relevant to determine whether high-  
482 profit headquarters may contribute to generating slack  
483 resources that allow MNCs to standardize the environ-  
484 mental practices within their internal network. Conse-  
485 quently, we propose the following hypothesis:

486 **Hypothesis 2** The headquarters' financial performance  
487 has a positive influence on the environmental standardi-  
488 zation decision within the MNC.

#### 489 The Moderating Effect of Headquarters' Financial 490 Performance on the Relationship Between 491 Environmental Institutional Distance 492 and Environmental Standardization Within MNCs

493 Although environmental standardization strategy is costly  
494 at the initial stage (Christmann and Taylor 2001), it has  
495 strong positive effects as well. Therefore, MNCs need to  
496 decide whether they should destine efforts to adopt an  
497 environmental standardization strategy, independent of the  
498 countries where their units are based.

499 On the one hand, since each country's institutional  
500 profile is very complex the implementation of standardized  
501 environmental practices worldwide may be difficult  
502 (Kostova and Roth 2002). Other studies show that firms  
503 that decide to introduce their operations in foreign coun-  
504 tries encounter more environmental difficulties than local  
505 firms (e.g., King and Shaver 2001). Further, it has been  
506 argued that high-distance countries may deter the imple-  
507 mentation and internalization of managerial standards by  
508 employees (e.g., Kostova and Roth 2002). Hence, these  
509 firms would obtain great benefits in the short term from  
510 generating and applying specific environmental manage-  
511 ment practices only in certain countries with a particular  
512 institutional profile.

513 On the other hand, the standardization strategy is a cost-  
514 reducing strategy since the knowledge can be transferred  
515 easily and at low cost within the firm (Bartlett and Ghoshal  
516 1989). It is also argued that by specifying a single and  
517 stringent environmental standard within the MNC, perfor-  
518 mance monitoring and evaluation costs would be reduced  
519 (Christmann 2000). This reason would be supported by the  
520 fact that a single set of values, specifications and proce-  
521 dures can be deployed throughout the world, without the  
522 need to consider local deviations from the norm (Dowell  
523 et al. 2000). Adopting an internal corporate environmental

524 standard ahead of legal requirements also contributes to  
525 reducing special interest group pressures, and may result in  
526 positive reputation effects for the MNC. In fact, firms with  
527 a strong corporate social responsibility reputation may  
528 have an advantage over competitors trying to sell the same  
529 kind of products without such a reputation (Castaldo et al.  
530 2009). Finally, through creation of environmental stan-  
531 dards, MNCs will be able to improve their transparency  
532 (Christmann 2004; Dowell et al. 2000) and international  
533 institutional legitimacy (Bansal 2005; Kostova et al. 2008).  
534 This latter type of legitimacy goes beyond that obtained at  
535 the national level, the purpose of which is based on  
536 obtaining only a license to operate.

537 Under these circumstances, we expect that MNCs with  
538 high-profit headquarters are willing to take advantage of all  
539 the benefits derived from an environmental standardization  
540 strategy and destine efforts to create green resources and  
541 capabilities in order to transfer them within their internal  
542 network, even if the units are based in high-distance  
543 countries. Therefore, not only would headquarters' profit-  
544 ability contribute to adopting more stringent environmental  
545 standards, but also to reducing the effect of the environ-  
546 mental institutional distance between headquarters' and  
547 subsidiaries' countries. Consequently, we propose the fol-  
548 lowing hypothesis:

549 **Hypothesis 3** The better headquarters' financial perfor-  
550 mance is, the lower will be the negative effect that the  
551 environmental institutional distance between headquarters'  
552 and subsidiaries' countries has on the environmental stan-  
553 dardization within the MNC.

## 554 Methodology

### 555 Sample

556 We focus on MNCs from three industries: chemical (SIC  
557 Code 28), energy and petroleum (SIC Code 29), and  
558 industrial machinery (SIC Code 37). We chose these  
559 industries because they are greatly affected by environ-  
560 mental issues (King and Shaver 2001). Countries that have  
561 been considered are the USA, Canada, Mexico, France, and  
562 Spain. We have chosen these five countries because they  
563 offer a good balance between availability of data, eco-  
564 nomic connections and environmental institutional differ-  
565 ences. First, in relation to their national environmental  
566 registries, they include detailed information about their  
567 facilities' releases and their belonging to a company's  
568 corporate tree. Second, in terms of economic connections,  
569 the USA and Canada, along with Mexico, are part of the  
570 North American Free Trade Agreement (NAFTA) that  
571 created the Commission for Environmental Cooperation

**Table 1** National environmental institutional profiles

Environmental institutional dimensions	USA	Canada	France	Spain	Mexico	Mean (146 countries)	Maximum value (146 countries)	Minimum value (146 countries)
Global	53	64.4	55.2	48.8	46.2	49.9	75.1	29.2
Regulatory	51.17	47.65	52.65	44.11	37.56	37.72	59.74	15.3
Cognitive	1.70	1.79	1.33	1.15	-0.22	0	2.03	-2.05
Normative	40	28	32	24	68.59	50.96	100	0.64

(CEC) of North America. France and Spain belong to the European Union (EU) and are members of the European Environmental Agency (EEA). Both NAFTA and the EU have established some common environmental guidelines and regulations. Finally, although these countries develop commercial collaborations, their national environmental institutional profile is very different. In fact, while we observed similar values in some dimensions—such as per capita income, health investment, or education and research and development investment for the period 2000–2006 (World Bank 2006)—we found significant differences in terms of the environmental institutional profile in general, and the environmental regulatory, cognitive and normative dimensions in particular, for each of the five countries included in our analysis.

To illustrate our description and establish environmental distinctions among all of the countries included in the analysis, we offer a new table where we show the values of the global environmental institutional profile and the environmental regulatory, cognitive and normative dimensions for each country, incorporating the mean, maximum and minimum values of the 146 countries included in the environmental sustainability index (ESI) 2005 (Esty et al. 2005; Table 1).

According to the data, Spain and Mexico are the countries with the least stringent global environmental institutional profile. Canada is the country with the most stringent environmental institutional profile. However, in terms of the regulatory, cognitive and normative dimensions, we observe that the ranking is substantially modified. For instance, Mexico is the country with the most stringent normative environmental institutional profile. In sum, we can state that the five countries incorporated in the analysis are institutionally different and diverse in terms of environmental issues.

In order to select our sample we used Standard & Poor's database (Capital IQ 2008). We began by selecting 309 MNCs working in one of the three selected industries and with headquarters based in the USA, Canada, Mexico, France, or Spain. Each MNC included in our sample was required to have at least one subsidiary based in one of the five countries, but different from the headquarters' country. We only considered those subsidiaries that belonged to the

same headquarters' industry. Once we selected the 309 MNCs, the next step consisted of searching facilities' environmental information in the national environmental registries.<sup>1</sup> We excluded local sales and distribution centre facilities. Our final sample consists of 135 MNCs and 210 cases (headquarters–subsidiary) to give a total of 1,872 facilities. The majority of headquarters are based in the USA and France (96 from the USA, 31 from France, five from Canada, and three from Mexico). In contrast, subsidiaries are more scattered (18 from the USA, 73 from Canada, 66 from France, 17 from Spain and 36 from Mexico). In relation to the industries' distribution, there are 97 cases from the chemical industry, 39 cases from the energy and petroleum industry, and 74 cases from the industrial machinery industry.

Hence, our sample offers a good availability of data (measured in a similar way to allow comparisons), economic connections (including a good range of international firms with headquarters and subsidiaries in the five countries) and national environmental institutional differences, providing the opportunity to analyze how the headquarters' and subsidiaries' countries' environmental similarities and differences influence the MNEs' managers' environmental decisions.

## Measures

### *Environmental Standardization Within the MNC*

In order to measure the environmental standardization within the MNC, we have considered the air releases in 2005 for each facility in our sample. The consideration of the air pollutants as an indicator of the firms' environmental performance has been widely reported in previous literature (e.g., King and Lennox 2000; King and Shaver 2001), and well recognized in the public media as a key dimension and proxy of global pollution. Moreover, this measure avoids subjective perceptions derived from the use

<sup>1</sup> USA: Toxic Release Inventory (TRI); Canada: National Pollution Release Inventory (NPRI); France and Spain: European Pollutant Emission Register (EPER); Mexico: Registro de Emisiones y Transferencia de Contaminantes (RETC).

of questionnaires with different CEOs and managers in the different countries where they operate. Consequently, we are able to reflect the real environmental impact that each MNC's unit (headquarters and subsidiaries) has on the natural environment. Specifically, we took into account the 50 most polluting substances included in the list of pollutants to be reported and whether the threshold value is exceeded and published in the European Pollutant Emission Register (EPER). Since, each pollutant has a different impact on the natural environment, we weighted each pollutant by its degree of toxicity (King and Shaver 2001). To do this we turned to the reportable quantities (RQ) measure from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) statute.

Once we calculated the air releases in kilograms at the facility level, we aggregated this data to obtain the headquarters' and subsidiaries' air releases. Finally, with the purpose of obtaining a value that shows the environmental impact that each unit (headquarters and subsidiaries) has on the natural environment, we calculated a ratio that expresses the coefficient between the air releases of each unit and its total revenues in 2005. In order to calculate the degree of environmental standardization between headquarters and subsidiaries we subtracted the headquarters' environmental ratio from the subsidiary's environmental ratio. We took into consideration the difference in terms of absolute value. A high value shows that headquarters' and subsidiaries' environmental performances are different. A low value indicates that both the headquarters and the subsidiaries standardize their environmental practices. We normalized this variable in order to avoid detrimental effects of dispersed values (Hair et al. 2008).

### Environmental Institutional Distance Between Countries

We measured the countries' environmental institutional profile through the environmental sustainability index (ESI) in 2005, published by the Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network (Esty et al. 2005). ESI benchmarks the ability of nations to protect the natural environment. It does so by integrating 76 data sets—tracking natural resource endowments, past and present pollution levels, environmental management efforts and a society's capacity to improve its environmental performance—into 21 indicators and five different dimensions of environmental sustainability. The environmental institutional distance between countries was calculated considering the differences in absolute value between the global ESI value of the headquarters' and subsidiaries' countries. This variable was normalized to avoid problems related to the dispersal of the information (Hair et al. 2008). Values that

are close to zero show that headquarters' and subsidiaries' countries have similar environmental institutional profile. High values reveal that countries have different environmental institutional profiles, and consequently protect the natural environment differently.

### Headquarters' Financial Performance

Environmental management and corporate social responsibility are related to financial performance (Hart and Ahuja 1996; Sharma and Vredenburg 1998; Smith 2003). Headquarters' return on equity in 2005 was used as a proxy of financial performance (Bansal 2005).

*Control Variables* These include headquarters' and subsidiary size, industry, headquarters' and subsidiaries' countries' environmental regulations, and headquarters' financial performance.

Headquarters' and subsidiary size: firm size is an important determinant of environmental conduct (Aragón-Correa 1998; Martín-Tapia et al. 2010) as well as of MNC strategy standardization (Yip et al. 1997). Headquarters' and subsidiaries' sizes were measured as the natural logarithm of their number of employees in 2005 (King and Shaver 2001).

*Industry* There might be incentives for firms to sign up to environmental industry codes. These codes can influence environmental management practices because they can produce a form of peer pressure from other firms within the industry (Lennox and Nash 2003). We controlled for type of industry by the inclusion of two dummy variables (chemical industry and energy and petroleum industry) in order to consider the effects of our three different industries (chemical industry, energy and petroleum industry, and industrial machinery industry).

Headquarters' and subsidiaries' countries' environmental regulations: we considered the environmental regulations that each headquarters' and subsidiaries' country has. We used the environmental dimension "Social and Institutional Capacity", contained in ESI 2005 (Esty et al. 2005). Through this dimension, we assessed the level of stringency, innovation and consistency that the different environmental regulations have in each country. We normalized this variable to avoid detrimental effects of dispersed values (Hair et al. 2008).

## Results

We used a moderated hierarchical regression analysis, introducing moderator effects as two-way interaction terms



**Table 2** Descriptive statistics and correlations

	Mean	Standard deviation	1	2	3	4	5	6	7	8
1. Standardization of environmental practices	0.46	1.48								
2. Headquarters' size	10.48	1.19	-0.13*							
3. Subsidiary size	6.25	1.56	-0.15*	0.37***						
4. Chemical industry	0.46	0.50	0.15*	-0.46***	-0.25***					
5. Energy and petroleum industry	0.19	0.39	-0.08	0.15*	0.13*	-0.44***				
6. Headquarters' country's environmental regulation	-0.01	1.03	0.02	0.05	-0.11 <sup>†</sup>	-0.01	-0.03			
7. Subsidiary's country's environmental regulation	0.13	0.90	0.12*	-0.12*	0.05	0.01	-0.01	-0.07		
8. Environmental institutional distance	0.01	0.51	0.11 <sup>†</sup>	-0.12*	0.17**	-0.01	0.12*	-0.36***	-0.07	
9. Headquarters' financial performance	0.08	0.90	-0.41***	0.18**	0.15*	0.04	0.05	-0.01	-0.12*	0.01

<sup>†</sup>  $p < 0.10$ ; \*  $p < 0.055$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

746 in the final step (Cohen and Cohen 1984). Before testing our  
747 hypotheses, we assessed the likely extent of common method  
748 variance, the conformity of our data's distribution to the  
749 assumptions of our analytic tools (normality assumptions),  
750 and the extent of multicollinearity among the independent  
751 and moderator variables. Analysis of variance inflation factors  
752 (VIF) show that multicollinearity was not a problem, the  
753 VIF values ranging below 5 as recommended by the literature  
754 (Hair et al. 2008). The VIF values for the last step ranged  
755 from 1.06 to 1.65, and the mean VIF was 1.35. Table 2 shows  
756 the descriptive statistics and correlations. No high correlation  
757 between our variables was observed.

758 Table 3 shows the results of the regression analyses  
759 testing the hypotheses. In model 1 we included the control  
760 variables: headquarters' and subsidiaries' size, industry, and  
761 headquarters' and subsidiaries' countries' environmental  
762 regulations. In model 2, we added the variable of environ-  
763 mental institutional distance between countries. In model 3,  
764 we incorporated the variable of headquarters' financial per-  
765 formance. Finally, in model 4, we included a variable that  
766 assesses the moderating effect of headquarters' financial  
767 performance on the relationship between environmental  
768 institutional distance between countries and MNCs' environ-  
769 mental standardization strategy. We improve our original  
770 model introducing key significant variables, ranging the  
771 adjusted- $R^2$  from 0.02 to 0.23.

772 Firstly, we see that the variable chemical industry has a  
773 negative and significant effect on the MNCs' environ-  
774 mental standardization strategy. The other control variables  
775 are not significant.

776 Secondly, the environmental institutional distance  
777 between the home and the host country has a negative

and significant impact on the standardization of envi- 778  
779 ronmental practices. Stated differently, the higher the  
780 environmental institutional distance, the less will be the  
781 degree of environmental standardization within the MNC.  
782 This evidence reinforces the fact that the institutional  
783 distance between countries explains better the MNC's  
784 environmental standardization strategy than the analysis  
785 of the headquarters' or subsidiaries' countries' environ-  
786 mental regulations. Hence, hypothesis 1 is supported by  
787 the data.

788 Thirdly, we observe that headquarters' financial per-  
789 formance has a positive and significant effect on the  
790 standardization of those practices. This implies that the  
791 better headquarters' financial performance is, the greater  
792 the environmental standardization within the MNC will  
793 be. Thus, hypothesis 2 is also supported.

794 Finally, the headquarters' financial performance has a  
795 positive and significant interacting effect on the negative  
796 relationship between the environmental institutional dis-  
797 tance between headquarters' and subsidiaries' countries  
798 and the environmental standardization within the MNC.  
799 We plotted this interaction effect using procedures out-  
800 lined in Venkatraman (1989).

801 As we see in Fig. 1, the better headquarters' financial  
802 performance is, the less is the negative influence of  
803 environmental institutional distance between countries on  
804 the environmental standardization within MNCs (lower  
805 line). On the other hand, not only are low-profit head-  
806 quarters not willing to standardize their environmental  
807 practices, but also do not reduce the negative effect of a  
808 big institutional distance between countries (upper line).  
809 Hence, hypothesis 3 is supported as well.

**Table 3** Results of the moderated hierarchical regression analysis

	Model 1	Model 2	Model 3	Model 4
Intercept	1.38 (1.08)	1.14 (1.08)	-0.32(1.02)	-0.36 (1.00)
Headquarters' size	-0.03 (0.10)	0.01 (0.10)	0.11 (0.09)	0.10 (0.09)
Subsidiary size	-0.12 (0.07)	-0.15* (0.07)	-0.10 (0.06)	-0.08 (0.06)
Chemical industry	0.28 (0.25)	0.29 (0.25)	0.53* (0.23)	0.55* (0.23)
Energy and petroleum industry	-0.05 (0.29)	-0.12 (0.29)	0.02 (0.26)	0.02 (0.26)
Headquarters' country's environmental regulation	0.02 (0.09)	0.11 (0.10)	0.10 (0.10)	0.09 (0.09)
Subsidiary's country's environmental regulation	0.29 <sup>†</sup> (0.11)	0.23 <sup>†</sup> (0.12)	0.16 (0.10)	0.14 (0.10)
Environmental institutional distance		0.28* (0.12)	0.29* (0.11)	0.26* (0.11)
Headquarters' financial performance			-1.16*** (0.10)	-1.44*** (0.20)
Headquarters' financial performance × Environmental institutional distance				-1.03*** (0.32)
$R^2$	0.05	0.08	0.22	0.26
Adjust $R^2$	0.02	0.04	0.19	0.23
$F$ change	1.85 <sup>†</sup>	5.35*	38.44***	10.43**

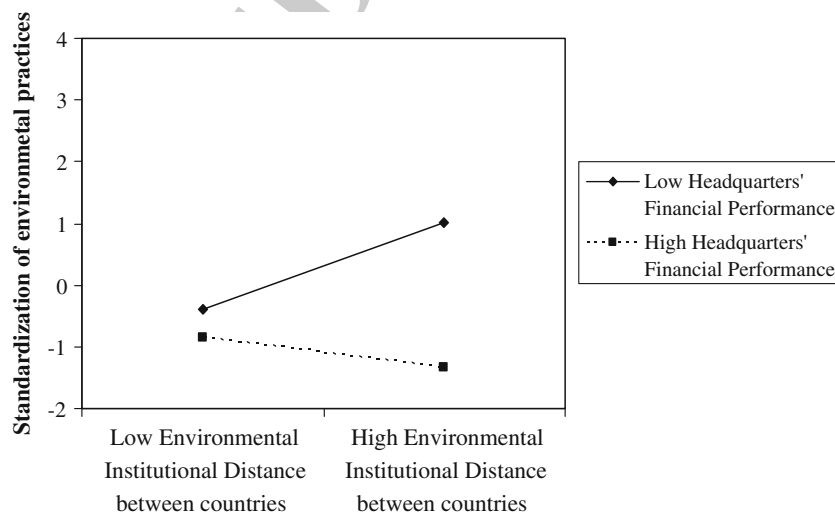
Dependent variable: Environmental standardization within the MNC

Non-standardized regression coefficients are shown. Standard errors are in parenthesis

Negative coefficients show a positive effect on the environmental standardization within the MNC. In contrast, positive coefficients show a negative impact on the environmental standardization within the MNC

$N = 210$ ; <sup>†</sup>  $p < 0.10$ ; \*  $p < 0.055$ ; \*  $p < 0.01$ ; \*\*\*  $p < 0.001$

**Fig. 1** The moderating effect of headquarters' financial performance on the relationship between environmental institutional distance between countries and environmental standardization within the MNC



## 810 Discussion, Limitations and Implications for Future 811 Research

812 In business ethics literature, there is a comprehensive  
813 debate of the role, extent and necessity of ethical decision  
814 making in business (Bush and Hoffmann 2009). The firm's  
815 challenge of simultaneously developing an environmental  
816 and profitable responsible attitude is a very relevant ethical  
817 issue (e.g., Hart 1995; Russo and Fouts 1997) and  
818 increasingly so nowadays. From a business ethics per-  
819 spective, not only does the development of advanced and  
820 proactive environmental management practices improve

the organizational and financial performance (e.g., Hart and  
Ahuja 1996; Shrivastava 1995), but also contributes to a  
more sustainable society by enabling management to  
address more quickly and adequately issues related to the  
natural environment (Bush and Hoffmann 2009).

In the context of MNCs, there is a general belief relating  
to the MNCs' code of conduct that ensures that their  
activities have a more negative impact on the natural  
environment than that of other firms (e.g., Vernon 1992).  
On the other hand, it has been suggested that MNCs  
increasingly self-regulate their environmental conduct.  
Therefore, firms would not take advantage of the different

833 levels of permissiveness that countries' environmental  
834 regulations have (Christmann 2004).

835 Combining the institutional and the resource-based view  
836 (Darnall et al. 2008; Oliver 1997), the purpose of this  
837 research is to analyze the influence of environmental  
838 institutional distance between headquarters' and subsidi-  
839 aries' countries, and headquarters' financial performance  
840 on the environmental standardization strategy within  
841 MNCs. Five contributions can be gained from this article.

842 First, we combine the institutional theory and the  
843 resource-based view in order to determine external (envi-  
844 ronmental institutional distance between countries) and  
845 internal (headquarters' financial performance) drivers that  
846 lead MNCs to generate and transfer environmental stan-  
847 dards within their internal network, independent of the  
848 regions where they operate.

849 Second, we can see that a low environmental institu-  
850 tional distance between the home and the host country  
851 encourages MNCs to transfer environmental standards to  
852 the rest of the units. Indeed, a low-environmental institu-  
853 tional distance between countries allows MNCs to gain  
854 legitimacy easily since they do not find difficulties in  
855 assimilating the national institutional requirements.

856 Third, we find that high-profit headquarters are more  
857 willing to destine efforts and resources to develop an  
858 environmental standardization approach within the MNC.  
859 Thus, these organizations are in an excellent position to  
860 reinforce their reputation, transparency (Christmann 2004;  
861 Dowell et al. 2000), internal coherence (Christmann and  
862 Taylor 2006) and their international institutional legitimacy  
863 (Kostova et al. 2008). Further, they can increase their level  
864 of efficiency and consequently reduce their operation costs  
865 through creation of environmental standards (e.g., Bartlett  
866 and Ghoshal 1989; Christmann 2000).

867 Fourth, we show that high-profit headquarters positively  
868 contribute to reducing the negative effects that a high envi-  
869 ronmental institutional distance between countries has on the  
870 environmental standardization within the MNC. Therefore,  
871 high-profit headquarters would not limit themselves to  
872 merely complying with the countries' environmental "rules  
873 of the game". Instead, they contribute to creating solid  
874 environmental standards, which are sources of competitive  
875 advantage. These standards will allow MNCs to create and  
876 transfer distinctive environmental dynamic capabilities,  
877 green technologies and processes within their internal net-  
878 work, independent of the environmental institutional profile  
879 of the countries where headquarters and subsidiaries are  
880 based.

881 Finally, additional critics of the Porter hypothesis of  
882 home-based environmental regulations beyond the home  
883 country size and the difficulties in anticipating the envi-  
884 ronmental regulations of all countries (Rugman and Ver-  
885 beke 1998a) are necessary. We show that the environmental

886 institutional distance between the home and the host  
887 country is the external factor that explains better this  
888 strategy, and not the headquarters' or subsidiaries' coun-  
889 tries' environmental regulations.

890 In sum, we create a bridge between the institutional and  
891 resource-based view in the analysis of the environmental  
892 standardization strategy within MNCs. Indeed, not only do  
893 these organizations give importance to the internal  
894 resources that can be obtained in a specific context, but also  
895 justify their existence through their direct contact with the  
896 agents from the countries where they have a presence  
897 (Rugman and Verbeke 2001).

898 From a government perspective, we aim to shed light on  
899 the way in which MNCs' activities affect the natural envi-  
900 ronment. Since MNCs are key operators in terms of economic  
901 and environmental development, they can promote social and  
902 environmental values in the society, and at the same time  
903 encourage other organizations and institutions to adopt a  
904 socially responsible attitude (Kolk and Pinkse 2008; Kolk and  
905 Van Tulder 2010). It is required that all public and private  
906 agents (e.g., governments, non-governmental organizations)  
907 become involved with MNCs' advanced environmental  
908 policies through the creation of social and political mecha-  
909 nisms worldwide that lead organizations to adopt more  
910 stringent environmental standards in all the locations where  
911 they operate. Indeed, environmental standardization can not  
912 only reduce MNCs' ability to exploit cross-national differ-  
913 ences in environmental regulations, but is likely to create  
914 friction with organizations in emerging economies which  
915 develop opportunistic approaches to environmental problems  
916 (Peng et al. 2008; Yang and Rivers 2009).

917 From a managerial viewpoint, this research encourages  
918 managers to develop an environmentally standardized  
919 approach. Through this approach, the MNC will be able to  
920 take advantage of positive benefits, such as improvement of  
921 environmental performance (e.g., Alberti et al. 2000;  
922 Beschorner and Müller 2007), and increase their corporate  
923 reputation, transparency (Christmann 2004) and institu-  
924 tional legitimacy (Bansal 2005; Kostova et al. 2008).

## 925 Limitations and Future Recommendations

926 Although we use secondary data in our sample to avoid  
927 bias in the measure of variables, we found some limitations  
928 in this research. The main one is that we have assessed the  
929 headquarters' and subsidiaries' environmental performance  
930 through their air releases. This indicator is incomplete  
931 since there are other environmental measures of perfor-  
932 mance (water and earth releases, waste recovery and pro-  
933 cessing) (Etzion 2007). In addition, we use cross-sectional  
934 data since we could not include observations in different  
935 years. Future studies would benefit from using data that  
936 were collected longitudinally.

937 There are also limitations related to the ESI effective-  
938 ness. Indeed, its methodology does not consider the possible  
939 interdependencies between variables in the different  
940 dimensions of the index. Moreover, the ESI is a relative  
941 index in which countries are scored relative to all other  
942 countries, which makes it difficult to measure progress  
943 towards sustainability for individual countries or the world  
944 as a whole (Niemejer 2002).

945 Finally, although large governments apply pressure, we  
946 need to take into consideration that national environmental  
947 registries are still incomplete and we observed in some  
948 cases lack of uniformity between them. It would be useful  
949 to analyze more heterogeneous countries in the future  
950 (as soon as necessary data is available) in order to improve  
951 our potential for generalization of results.

952 For future research, if data were available, it would be  
953 very interesting to include environmental information of  
954 subsidiaries based in developing countries in Asia and  
955 Africa (Kolk and Lenfant 2010; Pinkse and Kolk 2007).  
956 Indeed, MNCs can play an important role in addressing  
957 the huge environmental and ethical problems faced by  
958 these developing regions, such as pollution, human rights  
959 violations, inequality and poverty. Future studies can also  
960 make use of primary and secondary data simultaneously in  
961 order to reinforce and assess the firms' environmental  
962 progress in general, and the generation and implementa-  
963 tion of environmental standards in particular. Moreover,  
964 the strategic importance that subsidiaries may have on the  
965 MNCs' environmental management could also be con-  
966 sidered. Indeed, subsidiaries can establish diverse and key  
967 relationships with stakeholders (Rugman and Verbeke  
968 2001) that can contribute to generating environmental  
969 standards. Finally, future research could examine how the  
970 general strategic orientation of MNCs (transnational,  
971 global, multidomestic and home replicator) could moder-  
972 ate the extent to which headquarters and subsidiaries adapt  
973 to local environmental practices to gain national  
974 legitimacy.

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