



The role of environmental sustainability in the relocation choices of MNEs: Back to the home country or welcome in a new host country?

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ABSTRACT

This study investigates how firms' awareness of environmental sustainability affects the revision of their internationalization strategies. Combining Stakeholder and Signalling theories, we argue that firms concerned with environmental sustainability have a higher propensity to return to their home country when confronted with the need to relocate foreign manufacturing subsidiaries, in order to match Corporate Social Responsibility (CSR) stakeholder expectations and enhance the effectiveness of sustainable disclosure endeavours. We also argue that the home country's environmental policy stringency, reflecting a stronger pressure by stakeholders and a higher need for effective signals, positively moderates the relationship between the firm environmental sustainability concern and the likelihood to move back home. The empirical analysis conducted on a sample of 150 relocations performed across European nations in 2002–2016 reveals that MNEs signalling their CSR are more likely to backshore only in case of rigid environmental laws, which are perceived as an opportunity to align with CSR stakeholder expectations and to amplify the benefits of disclosing the shortening of their global value chain.

1. Introduction

For several decades, we have witnessed global strategy evolution that has led multinational enterprises (MNEs) to implement offshoring strategies (Doh, 2005) by promoting the migration of manufacturing activities to countries where labour costs are significantly lower (Kedia and Mukherjee, 2009). More recently, some MNEs have been embarking in a reconfiguration of the spatial distribution of their value chains leading to a revision of their global strategy. When firms revise their prior offshoring decisions and relocate formerly offshored operations, they undertake what has been defined as a “relocation of second degree” (RSD), namely “the location decisions that modify the country of destination of a previous offshoring investment” (Barbieri et al., 2019, p.1). RSDs can take

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the form of either a “relocation to home country” (RHC) – also referred in the literature as “reshoring” or “backshoring” – or a “relocation to third country” (RTC), when relocation occurs towards a second host country different from the domestic one (Barbieri et al., 2019).

While RTC entails the evolution towards a new country of previous internationalization strategy, RHC can be regarded as a form of “international business introversion” (Vrontis et al., 2021) entailing a shrinkage of a firm's international footprint. This tendency to revise previous offshoring decisions has been exacerbated by some macro-trends, which are completely revolutionizing the international distribution of globally spread value chains and urging a revision of firms' international footprint (Petricevic and Teece, 2019). First, IB literature has established an ongoing deglobalization process (Kobrin, 2017; Meyer, 2017), picturing loosened levels of interdependence among nations and consequent firms' decoupling responses, in the form of relocation and, more likely, reshoring (Witt, 2019; Witt et al., 2023). Then, the heightening emphasis on environmental sustainability, the fight against global warming and the race for the accomplishment of climate neutrality are increasingly driving a rationalization of value chains (UNCTAD, 2020). Rising of environmental awareness is also the societal consciousness and scrutiny over firms' way-of-working from various stakeholders, which are urging all economic entities to integrate green and social issues into their organizational practices (Zhang and Zhu, 2019). Particularly, the adverse consequences that offshoring and global sourcing have been provoked on societies and the environment (Jia and Jiang, 2018; Buckley and Hashai, 2020) have intensified scholarly efforts to understand and explain the way MNEs deal with key stakeholders to preserve environmental sustainability.

Based on these premises, Stakeholder theory is a functional framework to understand the role of sustainability in the revision of firms' internationalization strategy and can tell us more of global strategy evolution (Vrontis et al., 2022). As mounting is also the call for sustainably managing the whole supply chain (e.g., Foerstl et al., 2016), the integration of Corporate Social Responsibility (CSR) stakeholder expectations into the internationalization and global strategy domains seems reasonable. However, despite extensive literature on both corporate sustainability (Schneider et al., 2014) and relocation (e.g., Fratocchi et al., 2014; Barbieri et al., 2019), IB research is yet to unravel the jointly combination of the two phenomena and mostly lacks empirical evidence on global strategy evolution once MNEs come into terms with their social and environmental duties. This explains why the literature on relocation choices has pinpointed a research gap in relation to sustainability issues (Fratocchi and Di Stefano, 2019; Orzes and Sarkis, 2019).

This study aims at narrowing this gap by analysing whether and how sustainability concerns influence MNEs' selection of RHC vs. RTC. As such, we leverage on signalling theory (Spence, 1973; Connelly et al., 2011) to integrate stakeholder theory by addressing the following research question: **What is the role of environmental sustainability in the relocation choices of MNEs?** We argue that CSR disclosures can be interpreted as a valid proxy of firms participating in socially and environmentally sustainable activities (Hess, 2007; Herremans et al., 2016). Consistently with this argument, we assume that companies' endeavoring in sustainable reporting is an indication of their CSR efforts and we propose that MNEs signalling their sustainability commitment by means of CSR disclosure practices might be keener to revise their internationalization portfolio by voluntary repatriating foreign activities (RHC) – i.e. opting for international business introversion – rather than moving to a second host country (RTC) – i.e. opting for the evolution of their international strategy - with the ultimate goal to align to their stakeholders' expectations for sustainable behaviours. Indeed, RHC entails a reduction of the physical length of companies' supply chains that allows firms to iterate their pledge for emission reduction (Bonilla et al., 2015), reverse their globalization (Cuervo-Cazurra et al., 2017) and align to consumers' solicitations about pollution abatement (Nouira et al., 2016).

We further investigate whether the level of environmental policy stringency of MNEs' home country affects the likelihood to perform an RHC vs. RTC when confronted with the need to relocate foreign subsidiaries. More specifically, we propose that strong environmental laws are likely to nurture stakeholders' sustainability awareness and pressure, thus ultimately amplifying the willingness of MNEs that disclose CSR information to return back to a country of origin that value their sustainable commitment.

To test our framework, we perform an empirical analysis on a sample of 150 relocations occurred within Europe in the timespan 2002–2016, comprising 46 reshoring events (RHC) and 104 relocations to a second host country (RTC). The results stemming from our analysis show that signalling through sustainability disclosure is not sufficient to justify a restructuring of MNEs' entire international value chain through RHC. However, the results confirm the moderating role played by home countries' regulatory and institutional environment: indeed, a high degree of environmental policy stringency in the headquarters' country enhances the tendency to engage in an RHC from MNEs disclosing CSR practises.

We believe that this study can contribute to the relocation and the international business (IB) literatures by advancing novel insights on potential sustainability factors that are revolutionizing international business practices, by triggering the evolution (through RTC) and introversion (through RHC) of nonlinear internationalization paths (Ozkan, 2020; Vissak et al., 2020; McIvor and Bals, 2021). Via the adoption of the stakeholder theory in concert with the signalling one, we show that the pressure of stakeholders and the role of signals are effective in triggering RHCs – i.e. a global strategy introversion - only when the firm-level engagement in sustainability is complemented by the commitment of its home-country government to adopt and enforce environmental stringent policies.

The article is structured as follows. Initially, we review relevant literature to ground our hypotheses development. We then illustrate the sample and the methodology applied for analysis. After presenting the main findings, we conclude by discussing results, theoretical and practical contributions, and limitations of the study.

2. Theoretical background and hypotheses development

2.1. Firm-level sustainability and stakeholder theory

Stakeholder theory offers a suitable lens to deep dive into the motives underlying firms' adoption of sustainable practices. Freeman (1984) defines stakeholders as "any group or individual who can affect or is affected by the achievement of an organization's objectives" (Freeman, 1984, p.46) and he stresses the fact that managing firms' relationships with the many internal and external parties linked to their operations is conducive to companies' long-term survival and success. Stakeholders can be generally distinguished between primary and secondary stakeholders. Primary stakeholders, who are the ones that have a direct effect on firms' activities, include shareholders, employees, customers, and the natural environment (Freeman et al., 2010); secondary stakeholders, on the other hand, include actors who indirectly affect an enterprise's operations such as governments, local communities, and nongovernmental organizations (NGOs) (Maon et al., 2009). Advocates of stakeholder theory emphasize that expectations and interests of this whole pool of agents must be acknowledged when firms are crafting both short-term and long-term strategies (Freeman et al., 2010).

Nowadays, social and environmental interests have gathered major scrutiny by a wide variety of entities and sustainability can be positively regarded as an issue established in the mindset of all stakeholders (Hörisch et al., 2014). Many scholars have promoted the fit between stakeholder theory and sustainability management (Sarkis et al., 2010; Hörisch et al., 2014) and have highlighted that businesses' endorsement of sustainable practices can no longer be escaped (Barney and Harrison, 2020; Graham, 2020; De Luca et al., 2022). Traditionally, stakeholder demand and dynamic expectations have been identified as the trigger that has sparked corporate social responsibility strategic development (Maon et al., 2009). Corporations engage in CSR actions to respond reactively or proactively to changing stakeholder expectations for socially responsible behaviours (Buyse and Verbeke, 2003; Mariani et al., 2023; Vrontis et al., 2022). Reactive strategies mostly occur when firms simply respond to the coercive pressure exercised by regulatory bodies in order not to stumble upon penalties, fines, and legal action (Henriques and Sadosky, 1999; Zhu and Sarkis, 2007; Darnall et al., 2008). Regulatory bodies are indeed the most straightforward external actors that economic entities must deal with. Governments exert an influence over firms' environmental responsibility through the enforcement of strict laws and regulations (D'Souza et al., 2022), and the fear over future mandatory obligations in the sustainable domain might push firms to integrate sustainable thinking into business strategies, tactics and practices even beyond the current legal requirements (Lechler et al., 2020). Proactivity in the sustainable domain suggests a higher level of commitment to meet the expectations of a wider range of internal and external stakeholders (Sarkis et al., 2010; Graham, 2020). In this case, companies would be willing to improve their environmental performance beyond their own production processes, thereby expanding their sustainable intervention to the whole supply chain (Hart and Milstein, 2003; González-Benito and González-Benito, 2006). For instance, Lechler et al. (2020) provide evidence of an extension of sustainable practices to the supply chain level to fulfil expectations of various stakeholder groups and show how firms implement sustainability principles into their supply chain processes to address their sustainability requirements. Henriques and Sadosky (1999) find that pressure from a combination of internal and external stakeholders – including shareholders, customers, employees, suppliers, the government and community and environmental groups – is positively related with environmental proactivity. Trends like green consumerism indicate that social and environmental issues are also becoming crucial for customers (Ek Styvén and Mariani, 2020; Mariani and Borghi, 2022), who are increasingly aware of companies' sustainability initiatives based on the widespread availability of CSR information about their operations and practices (Darnall et al., 2008). B2B companies are not exempt from incorporating sustainability aspects into their strategic processes as corporate customers also pay attention to environmental compliance and adherence to environmental process standards like ISO 14001 (Delmas, 2001).

In this background of prevailing attention towards the environmental and societal domains, meeting stakeholder expectations

Table 1

Overview of the main stakeholders' motivations driving the implementation of sustainability practices.

Motivation/driver	References
Regulatory environment	Darnall et al. (2008); de la Cuesta González and Martínez (2004); Henriques and Sadosky (1999); Mahmood and Humphrey (2013); Lechler et al. (2020); Surroca et al. (2013); Zhu and Sarkis (2007)
Costumers' social and environmental concerns and requirements for sustainable products	Darnall et al. (2008); Gupta et al. (2013); Henriques and Sadosky (1999); Lechler et al. (2020); Singh et al. (2011); Prout (2006); Zhu and Sarkis (2007)
Investors' preferences for CSR	Helmig et al. (2016); Prout (2006)
Competition on CSR implementation	Graham (2020); Helmig et al. (2016); Zhu and Sarkis (2007)
Brand differentiation	Gupta et al. (2013)
Strive for social legitimacy in response to pressure from NGOs and environmental organizations	Darnall et al. (2008); Hart and Milstein (2003); Henriques and Sadosky (1999); Lechler et al. (2020)
Employees' commitment and involvement to the adoption of sustainable practices	Darnall et al. (2008); Helmig et al. (2016); Henriques and Sadosky (1999); Lechler et al. (2020)
Suppliers' pressure	Henriques and Sadosky (1999); Prout (2006)
Media attention	De Luca et al. (2022); Haddock-Fraser (2012); Henriques and Sadosky (1999); Zygliopoulos et al. (2012)
Shareholders' pressure	Henriques and Sadosky (1999)
Overall stakeholders' pressure	Buyse and Verbeke (2003); González-Benito and González-Benito (2006); Hörisch et al. (2014); Maon et al. (2009); Murillo-Luna et al. (2008); Sarkis et al. (2010); Seroka-Stolka and Fijorek (2022); Surroca et al. (2013)

related to sustainability is even more challenging for companies whose supply chains span over multiple countries (Kolk et al., 2010). As a matter of fact, MNEs must deal with requirements from both home and host stakeholders. Therefore, they are subject to greater public exposure and scrutiny (Mahmood and Humphrey, 2013). Their international operations are often questioned from a socially and environmentally responsible point of view. MNEs have typically been criticized for transferring their activities in locations with minimum social and environmental obligations and accused of engaging in exploitative behaviours without caring for weak environmental and employee standards (Prout, 2006). Media coverage of environmental scandals and human rights abuse in foreign locations, like Exxon oil spill or Nike child labor cases, has actually revealed companies' irresponsible way of acting, thus exacerbating public turmoil over the safeguarding of sustainability distress (Darnall et al., 2008). An overview of the main stakeholder-linked drivers found in literature to spur the implementation of sustainability practises is provided in Table 1.

Collectively, these studies outline the necessity for economic actors and especially MNEs not to overlook stakeholders' scrutiny and the urgency of their expectations about the prioritization of sustainability in their business strategies. Unclear evidence on MNEs' counteraction to rising CSR stakeholder expectations (Surroca et al., 2013) provides the basis to further analyse if and at to what extent multinational corporations commit to making their internationalization processes environmentally sustainable in the attempt to meet such expectations.

2.2. Sustainability and RSDs

Stakeholders are recognizing that participation in global value chains may come at the expense of society and the environment (Gereffi and Lee, 2012). The emerging deficiencies in the globalization model defined by a massive trend of offshoring manufacturing activities to low-cost countries has sparked scholarly attention as regards the extent to which sustainability might trigger a relocation decision of previously offshored activities (Ellram, 2013; Orzes and Sarkis, 2019). (Re)location of production activities is known to impact all three dimensions (environmental, social, governance) of firms' sustainability (Sutherland et al., 2016) and the intensified emphasis on environmental and social issues has led IB scholars to question whether sustainability could be actually considered as a new motive for revising firms' internationalization strategy (Fratocchi and Di Stefano, 2019). For instance, Tate (2014) has underlined that among the drivers of firms' reconsideration of the appropriate "shoring" tactic there are sustainability concerns. Particularly, as Fratocchi and Di Stefano (2019) point out in their systematic literature review on the topic at hand, depending on the strategic salience that organizations attach to sustainability, it might play the role of driver, motivator, barrier or enabling factor in firms' decision to revise their internationalization path and worldwide presence. Their empirical investigation shows that incorporating suppliers and customers when designing firms' sustainability strategy is conducive to the (re)creation of a local supply chain which is actually able to prompt positive social and environmental outcomes. Similarly, a qualitative study by Ashby (2016) provides one of the few examples of a repatriation of foreign activities permeated by the firm's commitment to help the local community and to manage more easily its environmental impact.

As for the sustainability-related benefits resulting from RSD, pollution reduction and usage of greener technologies have been identified as outcomes of manufacturing activities not dispersed in remote locations (Sirilertsuwan et al., 2018). Moving to the social pillar, sustainability and RSD are intertwined as of the impact that relocation has on home and host country employment levels. A company that feels to have a social duty with respect to their home country may choose RHC to support the welfare of its own community while the protection of host country workforce might lessen the appeal of a back-shoring strategy (Engström et al., 2018).¹

All of the studies mentioned here support the critical relevance of incorporating the sustainability pillar within the pool of motives possibly perturbing the evolution of globally dispersed supply chains. However, despite these early attempts, research today has not yet determined if sustainability relates to firms' relocation choices and there remains a paucity of empirical and quantitative evidence on the relationship between the two phenomena. Drawing upon this evidence, we believe that the present study will help to unravel the quandary about whether and how sustainability might become an actual and clear trajectory affecting the evolution of non-linear internationalization paths.

2.3. The complementary role of signalling theory

The review of the literature presented so far has highlighted the lacking integration of sustainability concerns into the generalist view of the motives influencing RSD. Along with the role played by growing stakeholder expectations concerning sustainability, to better discern the reasons why relocation choices undertaken by MNEs could be linked to their sustainable orientation, we resort to signalling theory as a complementary theoretical lens to the stakeholder one.

Relative to signalling theory is the denotation of signals as private information communicated by firms to an audience of multiple stakeholders who make subsequent decisions according to their interpretation of the signal received (Spence, 1973). A firm provides several signals to its stakeholders, that should be consistent with each other in order not to befuddle them (Connolly et al., 2011).

Over the past years, stakeholders' demand for more transparent environmental, social and governance disclosure by corporations regarding the extent to which they affect and are affected by sustainability issues has mushroomed. To face such requests and express their commitment to all stakeholders, companies have begun to publish non-financial information (Wang et al., 2018). Indeed, when it

¹ Needless to say, the reorganization of global value chains might be the by-product of radical protectionism and national populism movements. As observed by Mariotti (2022), the reshoring programs stipulated by governments in the aftermath of financial crisis and political instability often add to the set of discriminatory interventions that amount to unfavorable global economic and social redistributive effects.

comes to sustainability issues, the foremost way to nurture stakeholder dialog is by means of sustainability reporting (Hess, 2007), which is the primary approach employed by those corporations that want to divulge their social and environmental performances and plans to primary and secondary stakeholders. Companies which have articulated an environmental plan are the most prone to broadcast their social and environmental commitment (Huang and Kung, 2010), thus creating CSR expectations, which can be defined as “stakeholders' beliefs of how much responsibility corporations have on different social issues” (Yang et al., 2020). Stakeholders set expectations according to a company's reputation, which represent the groundwork for stakeholders' evaluation of business conduct (Yang et al., 2020).

On this account, drafting a sustainability report is likely to be interpreted as a signal of a firm's pledge to partake into sustainability protection (Henriques and Sadorsky, 1999). Especially in front of voluntary disclosure agreements, the choice to vouch to sustainability reporting is plausible to boost a company's image of a socially conscious entity and to create stakeholder expectations for responsible organizational behaviours (Longoni and Cagliano, 2018). On the contrary, the absence of such a document² would imply that the company does not rank social and environmental contentions among its priorities, suggesting an insufficient integration of sustainability-related principles into a firm's long-term plans. As such, we regard the act of communicating with stakeholders through sustainable reporting as a positive signal indicating firms' sustainable orientation and we refer to multinational firms committed to this disclosure practise as CSR-signalling MNEs. Firms' strategic responses to the high CSR expectations resulting from CSR signalling vary according to their stakeholder engagement strategy (Herremans et al., 2016). Indeed, heterogeneity of multinational enterprises' commitment to sustainability matters yields various managerial responses to stakeholder pressure towards the adoption of environmental practises (Huang and Kung, 2010). Green and ethical actions would be interpreted as signals congruent with sustainability reporting, they would amplify its positive impacts and increase the effectiveness of communication (Connelly et al., 2011; Longoni and Cagliano, 2018). Conversely, sending contrasting signals, for example by engaging in unethical behaviours, would confound stakeholders and make them question the authenticity of an enterprise's commitment to sustainability (Zhang et al., 2022); this would eventually lead to reputational damage (Maas et al., 2014).

Extending the same reasoning to the context of RSD, we propose that once pledged to relocate their foreign manufacturing operations, MNEs that are subjected to greater stakeholders' pressure for sustainable management will more likely select the relocation alternative that mostly conform to CSR stakeholder expectations. Between RHC and RTC, we assume that the former is a congruent signal that will likely enhance the strength of non-financial reporting (Lampel and Shamsie, 2000).

2.4. Linking CSR signalling to RHC

In the previous sections, we have introduced sustainable disclosure as a signal of an organization's explicit integration of social and environmental topics into its decision-making processes. As internationalization movements seriously affect the distribution of social and environmental impacts (Li and Zhou, 2017), non-linear internationalization paths represent a fruitful avenue to investigate whether MNEs that make explicit their social and environmental values are keen to sustainably managing their RSD strategy with the goal to align to their CSR stakeholder expectations and to avoid sending mismatched signals. We advance that RHC would be perceived by stakeholders as the internationalization choice compatible with sustainability concerns, hence it would be the preferred relocation alternative for MNEs that aim at amplifying the positive impact of sustainable reporting. By showing higher awareness of sustainability issues through disclosure of non-financial information, firms create expectations for socially responsible behaviours (Huang and Kung, 2010).

In the context of RSDs, the shortening (i.e. introversion) of globally dispersed supply chains through a relocation to the home country is arguably the internationalization strategy perceived as more socially and environmentally friendly, compared to the decision to relocate foreign manufacturing activities to further distant nations (i.e. evolution). For instance, as internationalization may put at risk the achievement of a global reduction of greenhouse gas emissions, a pull-back from international production might additionally promote firms' environmental integrity. Sirilertsuwan et al. (2018) provides evidence that the shortening of globally spread value chains through the repatriation of foreign subsidiaries allows the reduction of carbon emissions, due to lower transportation requirement and usage of cleaner technologies and energy sources. Purchased transportation and distribution account for the largest part of Scope 3³ emissions (Herold and Lee, 2017) and a key factor like rising stakeholders' pressure for low-carbon initiatives is likely to lead companies to prefer management practises that provide for pollution abatement. Consistently with this phenomenon, Ashby (2016) points out how having a local supply chain could offer firms opportunities to access skills and competences essential for enacting sustainable strategies, minimising environmental impact and increasing managerial control. More recently, Nippa et al. (2021) have discovered that MNEs' plants located in the same country as their headquarters' one, exhibit superior carbon performance compared to those situated in foreign countries, likely as results of closer positioning to R&D, which allows a prompt application of

² The mandatory practice of sustainability reporting has been introduced by the Non-Financial Reporting Directive of the European Union (Directive 2014/95/EU, “NFRD”) only in 2014, while the European Member States had to comply with the regulation starting from 2018; given that the RSDs considered in this study took place mostly before the year 2014, the decision to publish sustainability report is mainly based on voluntary disclosure.

³ According to the Greenhouse Gas (GHG) Protocol Corporate Standard, companies' GHG emissions can be classified into Scope 1, 2 and 3. Scope 1 emissions are “direct emissions from owned or controlled sources”, Scope 2 emissions are “indirect emissions from the generation of purchased energy” and Scope 3 emissions are “all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions”.

carbon emission reduction strategies.

Building on this literature, we advance the idea that in the background of RSDs, moving to the headquarters' country is likely to be the preferred option for MNEs that aim at aligning to high CSR stakeholder expectations, being it recognized as more sustainable-oriented than venturing in a new foreign nation and perpetrating in a further international shift.

Moreover, supply chains that span outside domestic boundaries are notably potential sources of legal, reputational and operational risks connected to environmental and safety accidents (Kleindorfer et al., 2005), which MNEs located throughout the world are particularly exposed to Klassen and Vereecke (2012). The global dispersion of subsidiaries and the consequent fragmentation of production activities often give rise to challenges in the management of environmental and social problems that firms might not always be able to solve, and which damage firms' image and generate revenue losses (De Marchi et al., 2013; Grimm et al., 2016). Disruptive subsidiaries' behaviours are often the undesirable consequence of substantial formal and informal institutional distance between the home and the host country (Aguilera-Caracuel et al., 2013; Dhanaraj and Beamish, 2009). Entities operating in culturally distant markets endure complications in sociocultural integration and the creation of a sense of trust, shared identity and compatible values (Stahl and Voigt, 2008), thus undermining the transferring of corporate social responsibility ideologies overseas. The greater an organization's foreign presence, the greater the struggle for effective coordination and communication with transnational subsidiaries (e. g., Kostova et al., 2016) and the lower the control over foreign counterparts' performances, including their social and environmental ones (Gualandris et al., 2014; Foerstl et al., 2016). International exposure is indeed a source of pressure for MNEs and their adoption of sustainable-oriented practices, which is challenged by the inherent heterogeneity of the multiple institutional environments in which they operate (Marano and Kostova, 2016). In this perspective, managers that want to cater stakeholder expectations could find in RHC a conduit to diminish risk exposure and vulnerability, and to gain credibility in the eyes of external agents (Ashby, 2016).

To summarize, we suggest that once decided to embark in an RSD, the higher MNEs' commitment to sustainability issues signalled by means of sustainable disclosure practises, the greater the likelihood to move production back to the country of origin, being the alternative most in line with stakeholder expectations. In other words, we argue that to match CSR stakeholder expectations and enhance the effectiveness of sustainable disclosure endeavours, CSR-signalling MNEs are more likely to select RHC over RTC when facing a relocation choice.

H1. CSR-signalling MNEs are more inclined to engage in an RHC rather than in an RTC when revising their previous manufacturing offshoring decisions.

2.5. The moderating effect of home-country environmental policy stringency

Institutions provide the rules of the game in which corporations and stakeholders interact among themselves (North, 1990). Consequently, both sustainability management and (re)location decisions cannot overlook the role played by the institutional environment and the distinctively different environmental regulatory schemes in place across nations. On the one hand, stringent environmental policies are required to foster environmental proactive strategies and improve sustainable management practises (Porter and Van Der Linde, 1995; Zhu and Sarkis, 2007). On the other, heterogeneous enforcement of sustainability-related laws has created arbitrage opportunities for MNEs to relocate their pollution-intensive operations to poor regulated countries (Li and Zhou, 2017). Country-specific regulatory pressure is an external institutional factor MNEs must confront with (Kafouros et al., 2022; Rugman and Verbeke, 1998) that is able to reshape organizational decision-making and internationalization propensity (Gaur et al., 2014; Huang and Sternquist, 2007; Tate et al., 2009). Scholarly debate in IB has long been revolved around the propensity of multinational corporations to exploit lax environmental regimes transferring their highly polluting activities in less developed countries. For decades, these standard gaps have spurred MNEs to establish low-cost offshore production operations and to adopt sub-standard labour practises (Palley, 2002). However, in response to worldwide sustainability challenges, such as global warming, countries have been consistently issued environmental laws and regulations that vary according to the nation-level political and social preferences, thus magnifying the unpredictability of responsible business activities outcomes (Wijten and Van Tulder, 2011).

As a matter of fact, when countries empower their environmental legislation and set up new enforcement mechanisms (i.e., formal institutions), civil awareness on social-environmental issues (i.e., informal institutions) is strengthened as well.⁴ Setting up new environmental-related regulations and incentives can indeed help to nourish sustainably oriented mindsets among stakeholders (Hörisch et al., 2014). This bottom-up sophistication of local influential agents who start to demand broader societal participation from companies intensifies stakeholders' pressure and makes easier the exposure of business wrongdoings (Zhao et al., 2014), thus increasing the risks and reputational damage of moving production to suboptimal countries. As noted by Zhao et al. (2014), flawed bureaucratic governance systems and weak regulation enforcement in the environmental domain allow for suboptimal business ethics and incentivize MNEs misdeeds and social misconducts. On the contrary, greater primary and secondary stakeholders' pressure in strict contexts stimulate companies to improve their environmental responsibility (D'Souza et al., 2022). Consequently, it follows that undertaking a repatriation of manufacturing activities towards countries that do not weight sustainability in their political agenda is likely to be interpreted as a mismatched signal from CSR-signalling MNEs (Surroca et al., 2013). Vice versa, back-reshoring to nations that value the strictness of environmental laws is foreseeable to be welcomed by stakeholders as a strategy that contribute to stop exploitation of less stringent regulatory frameworks (Grappi et al., 2018). To this end, we introduce the degree of environmental

⁴ The strong interdependence between formal and informal institutions have been largely debated within the New Institutional Economics theory (North, 1990; Williamson, 2000).

regulatory stringency in the home country as factor strengthening the positive signalling effect of sustainable reporting and as a crucial moderator of the likelihood of CSR-signalling MNEs to repatriate their foreign operations when addressing an RSD.

One may argue that stakeholders' pressure originating from stringent regulatory environments in the home country makes the life of multinationals tougher in their country of origin by demanding a greener attitude and imposing additional costs (Jaffe et al., 1995). However, CSR-signalling MNEs may be in the position to sidestep imposing policies and taxes compared to unperceptive competitors, to lower compliance costs and to reap the benefits out of environmental subsidies (Li and Zhou, 2017). Countries' enacting pro-environmental laws also represent an advantageous playfield for sustainable-attentive firms to make the most out of their relationships with governments, accrue political capital and more easily establish collaborations with them (Darnall et al., 2008), therefore they should be preferred by those entities that want to fulfil high CSR expectations.

Furthermore, multinational corporations are shifting from the search for low-wage and weakly governed locations where to install their production factories to an increasing focus on utilizing at best the strengths and potential of their facilities in their home base (Brennan et al., 2015). Companies paying attention to stakeholder environmental requests might appraise rigorous home environmental regulations as creating the adequate conditions to meet their stakeholders' sustainability-related expectations and to potentially magnify the signalling value of sustainable disclosure. As such, CSR-signalling MNEs should be more inclined to implement an RHC in a country that recognizes and rewards their effort in adopting sustainable-oriented practices.

In view of all that has been mentioned, we argue that having decided to relocate foreign manufacturing activities, the likelihood to return home for MNEs engaging in CSR signalling increases if the environmental regulatory framework in their country of origin is aligned to CSR stakeholder expectations. In other words, we propose that rigid environmentally related policies create a sustainable-oriented scene that amplifies the positive effect of RHC. On the contrary, shortening global value chains by relocating to poor regulated home countries might not appear as mirroring stakeholder expectations for sustainable management practises. We thus expect to see a greater inclination of CSR-signalling MNEs to perform a RHC when their home country is highly supervised from an environmental perspective, otherwise a repatriation to defective institutional contexts might not be embraced by stakeholders.

H2. The level of environmental regulatory stringency in the home country positively moderates the likelihood that CSR-signalling MNEs engage in an RHC rather than an RTC when revising their previous manufacturing offshoring decisions.

The conceptual model is illustrated in Fig. 1.

3. Empirical methodology

3.1. Data sources

To test our hypothesis, we leveraged on a dataset which collects relocations occurred in Europe in the timespan 2002–2016. Data were retrieved from the European Restructuring Monitor (ERM), which records from 2002 instances of company restructuring that took place in one of the EU 27 nations plus Norway. To fall within the scope of the ERM, a restructuring event must entail an announced reduction/creation of at least 100 jobs or affect at least 10 % of the workforce if the site employs >250 people. A number of national media sources, including newspapers and business press are scanned by the ERM to extract mention of relocation events. It should be noted that such displacements of foreign activities could include both a complete and a partial divestment of operations that were previously offshored by the MNE in a first host country.

To structure our dataset, we first downloaded all the movements classified by the ERM as “relocation” or “offshoring/delocalization” available between 2002 and 2016. The former is defined as “when the activity stays within the same company, but is relocated within the same country”, while the latter is defined as “when the activity is relocated or outsourced outside the country's borders” (ERM, 2013). Reshoring cases (i.e., RHC) are identified by the ERM as a subset of offshoring cases, for which the destination of the offshored jobs overlaps with company nationality. To be sure that the recorded event involves a relocation of the MNE's activities, the narrative of the restructuring case provided by the ERM has been addressed. For each event, the information we have recorded refers to the name of the company, home country, first host country, second host country, announcement date, NACE code (2 digits), text of the news and source (i.e., link of the article). The second host country either overlaps with the MNE's country of origin (RHC) or conversely, it is a novel European nation different from the MNE's headquarters base (RTC). Then, we excluded all the events characterised by a non-European nation as home, first host or second host country. This was a mandatory choice since the ERM looks closely just at relocations happened within Europe, hence some critical information could be missing in case of overseas movements.

After reading through the text of the news, we kept just the cases relevant to our study and we classified RHC and RTC according to the nation chosen as target for the relocation decision. Regarding the sector, we included in our analysis manufacturing firms operating in multiple industries at the NACE Rev. 2 2-digit level.

After combining the dataset of relocation events by manufacturing firms with information on their sustainability attitude and countries' environmental policy stringency, we obtain a final sample of 150 events for which all explanatory and control variables are available.

3.2. Variables

3.2.1. Dependent variable

In our model, the dependent variable is RHC, a dummy variable that takes the value of 1 when the MNE has performed a relocation to its own home country. Conversely, it takes the value of 0 when the company has decided to relocate in a new European country, so

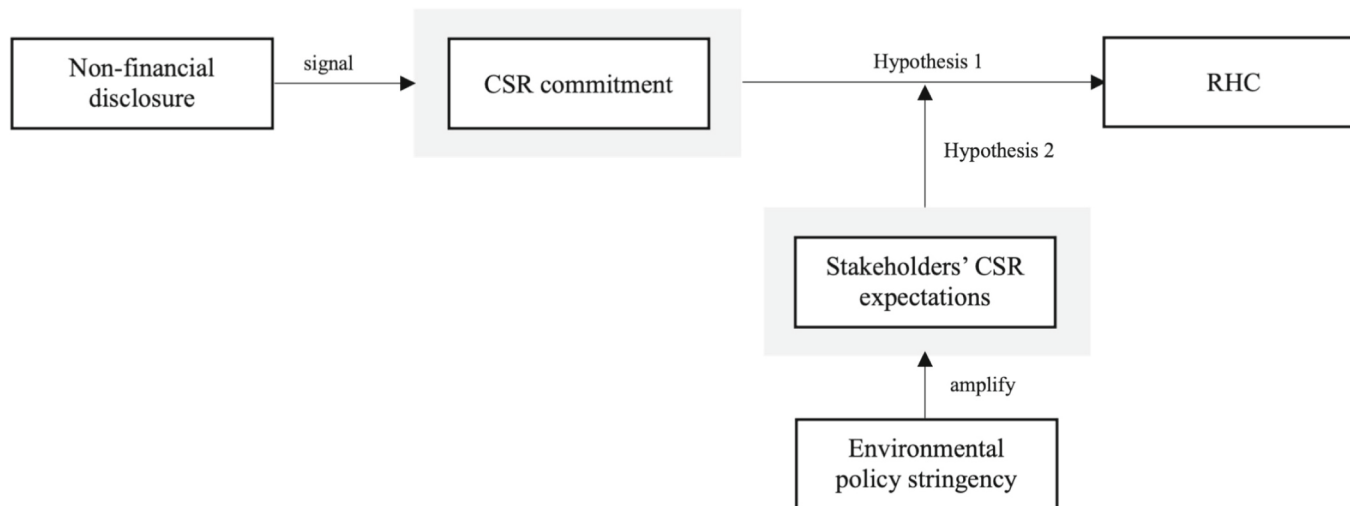


Fig. 1. Visual representation of our conceptual framework based on stakeholder and signalling theory to theorize about the relationship between disclosure of non-financial information and the moderating role of environmental policy stringency.

when the new host country differs from the headquarters' one.

3.2.2. Explanatory variables

The first explicative variable at the core of the model is *Sustainability report*, a dummy variable that is equal to 1 if the MNE announcing its decision to relocate drafted a sustainability report in the year prior the announcement date. The websites of each single firm were searched and analysed to check the availability of non-financial information for every relocation event.

This dummy variable allows for the discrimination among CSR-signalling MNEs and firms that do signal any responsibility towards sustainability matters. Despite the mixed evidence about the relationship between the quality of environmental disclosure and environmental performance, the lack of sustainability reporting can be interpreted as lower managerial commitment to the integration of all stakeholders' needs and expectations (Herremans et al., 2016). When managers do not perceive the business advantages of environmental reporting or they are not subject to legal requirements and stakeholder pressure, they seem to doubt the potential benefits arising from it, weighting more the resulting cost burden (Martin and Hadley, 2008; Stubbs et al., 2013).

Our empirical study has been conducted on relocations occurred within European borders endeavoured by MNEs that were not subject to the same institutional framework for the time horizon examined. Precisely, the majority (approximately 90 %) of the events included in our dataset took place before 2014, year of ratification of the Directive 2014/95/EU, a landmark intervention for mandatory non-financial disclosure in Europe. This regulation, also known as Non-Financial Reporting Directive, mandates the preparation of a non-financial report containing the description of the policies, outcomes and risks related to environmental, social and corporate governance matters by the large undertakings subject to the law itself. European Member States had to comply with the regulation starting from 2018, referring to the financial year of 2017 (EU, 2014). Furthermore, EU Member States were allowed to locally transpose the EU Directive and impose state-specific requirements about the company scope, defining the characteristics of the undertakings that must adhere with the regulation.⁵ Since our sample stop at 2016, we can infer that most of the publications on behalf of focal MNEs were voluntarily ones, thus indicating higher sustainable and stakeholder engagement compared to non-reporters, that conversely seem not to recognize their responsibility towards society at large.

The second independent variable employed in this study accounts for countries' environmental regulatory framework, and it allows us to test H2. The concept of environmental policy stringency has been investigated for decades and several efforts have been made in the Environmental Economics literature for measuring appropriately the level of countries' regulatory commitment. Brunel and Levinson (2013) present a review of the popular proxies employed to operationalize this notion, distinguishing them into five categories, namely (i) private-sector pollution abatement expenditures; (ii) direct assessment of the regulations; (iii) composite indexes; (iv) measures based on ambient pollution, emissions or energy use, and (v) pollution-control efforts by government. Despite the various attempts made thus far, researchers still must confront with few obstacles and challenges hindering a comprehensive and sound assessment of environmental policy stringency across time and countries. For the purpose of this analysis, a composite index has been chosen for measuring country-level environmental regulatory commitment and specifically, the OECD Environmental Policy Stringency (EPS) indicator (Kruse et al., 2022), recently revised from its previous 2014 version (Botta and Koźluk, 2014). It aggregates thirteen policy instruments, categorized into four macro-areas: Taxes and Certificates, Performance standards, Upstream support and Adoption support. As such, it considers both policies aimed at increasing the cost of emitting pollution and subsidizing instruments, which are interpreted as providing an advantage to more sustainable activity and growing the opportunity costs of polluting, thus increasing stringency. A second aggregation step collects the four macro-categories mentioned in either market-based (Taxes and Certificates), non-market based (Performance standards) or technology support (Upstream support and Adoption support) instruments. A score from 0 (no policy) to 6 (most stringent) is firstly assigned to each instrument and then, equally weighting each single one of them, to the four macro-areas identified. Following the aggregation procedure, the final EPS for each country and each year is obtained equally weighting the scores assigned to the market-based, non-market-based and technology support categories. The upside of employing a composite index stands in its ability to summarize a pool of laws and policies in a unique figure, that subsequently can be exploited for cross-country comparison (Brunel and Levinson, 2013). At the end, the second explicative variable included in our study is *Home country environmental policy stringency*, measured as the OECD EPS index the year prior to the relocation announcement. This variable enabled us to test H2, so the moderating role of the tightness of country-level environmental policies in CSR-signalling MNEs' RSD strategy.

3.2.3. Control variables

To account for potential alternative explanations underpinning the choice to perform RHC vs. RTC, we introduced in our model a number of country-, industry- and firm-level control variables.

As regards the country effects, recalling the types of location advantages identified by Dunning (1998), control variables that reflect the market-seeking, efficiency-seeking, resource-seeking and strategic-asset-seeking advantages of the domestic and the first host countries have been encapsulated in the model. Indeed, Barbieri et al. (2019) have shown that RHC is more likely than RTC when the first host country could exhibit market-seeking or strategic-asset-seeking location advantages in the years preceding the relocation announcement, while RTC is more likely when the first host country could rely on resource-seeking or efficiency-seeking location advantages in the years preceding the relocation announcement. As regards the home country, the probability to undertake RHC is

⁵ Information about the state of implementation and transposition of the Directive 2014/95/EU across European countries were retrieved from the publication made by the Global Reporting Initiative (GRI) and CSR Europe, in collaboration with Accountancy Europe (<https://www.accountancyeurope.eu/wp-content/uploads/1711-NFRpublication-GRI-CSR-Europe.pdf>).

expected to increase in case of high location advantages in the years preceding the RSD. Values are computed, for each single observation, as the average of the three years prior the relocation announcement. Building on [Barbieri et al. \(2019\)](#), *Home country market-seeking advantage* and *Host country market-seeking advantage* have been proxied as the GDP per capita in US\$ at Purchasing Power Parity, constant 2011 and they capture the extent of the market opportunities offered by the home and first offshoring country. Resource-seeking and efficiency-seeking advantages have been measured, respectively, in terms of cost-saving advantage and productivity-seeking advantage. For the former (i.e., cost-saving), we adopted *Home country labor cost* and *Host country labor cost*, which measure the average unitary labor cost in the three years prior the relocation announcement.⁶ For the latter (i.e., productivity-seeking) we referred to *Home country productivity-enhancing advantage* and *Host country productivity-enhancing advantage* as the GDP per person employed in US\$ at Purchasing Power Parity, constant 2011. Finally, strategic-asset-seeking advantage has been accounted as the number of researchers in the R&D function per million people in the headquarters' (*Home country strategic asset-seeking advantage*) and the first offshoring countries (*Host country strategic asset-seeking advantage*). All data were gathered from the World Bank database, together with the OECD Compendium of Productivity Indicators for unitary labor costs.

Additionally, *Cultural distance* was applied to control for the cultural distance between the home and the first host country, relying on the index developed by [Kogut and Singh \(1988\)](#).⁷ The selection of this proxy is consistent with previous research that relies on the Kogut & Singh construct to deal with differences in national cultures ([Kandoga, 2012](#)).

Concerning firm-level variables, *Firm size* has been included to control for the size of the MNE, computed as the average total assets for the 10 years prior the relocation announcement, expressed in thousands of US\$ and retrieved from Orbis – Bureau Van Dijk.

Financial crisis controls for the short-term pernicious impacts of the 2007/08 financial crisis: it is a dummy variable that takes the value of 0 for relocation announcements prior the end of 2008 and 1 when the announcement date is comprised between 2009 and 2016. Lastly, we inserted a set of industries dummies denoting the specificities of each single industry at 2-digit NACE Code and year dummies, to capture year-specific effects.

3.2.4. Descriptive statistics

[Table 2](#) shows descriptive statistics of the variables included in our model and the corresponding correlation matrix. Overall, among the 150 observations included in the sample, 46 are the cases of RHC and 104 are the cases of RTC.

As it emerges from [Table 3](#), about 46 % of relocations are executed by CSR-signalling MNEs, while the remaining 54 % are relocations, either RHCs or RTCs, performed by companies deemed not to care about engagement of CSR stakeholder expectations. Most of the backshoring events appear to be performed by MNEs that do not publish a sustainable report with a percentage of 54.3 % compared to the 45.7 % of RHC undertaken by CSR-signalling corporations.

[Table 4](#) provides a description of the industries included in the sample. We can observe a majority of RHC events in the “Manufacture of motor vehicles, trailers and semitrailers” industry (NACE 29), followed by “Manufacture of chemicals and chemicals products” (NACE 20) and “Manufacture of food products” (NACE 10).

As for the distribution of events along time, a growing trend of relocations to third countries announcements is registered until 2006, when a consistent backdrop from forward-moving revisions of firms' internationalization portfolio occurs. Concerning repatriation, the peak of announcements is reached in 2009.

Taking a look at the geographical direction of the relocation events, [Table 5](#) displays the distribution of RHCs/RTCs according to the respective home country, first host country and second host country. For what concern the headquarters' country, the most frequent nation is Germany (44 events), followed by Sweden (23 events). Germany reconfirms itself as the preferred target destination after RTCs (24 events), followed by Poland (23 events). Finally, looking at first host nations, most of the relocations arise from France (28 events), followed by Germany (16 events).

Focusing just on RHCs, the average environmental policy stringency of the target home countries, measured as the average OECD EPS Index, is 3.065, higher than the one in the first host country (2.954). We can conclude that RHCs occur, on average, towards more stringent nations. Additionally, an interesting statistic emerges when looking at the mean value assumed by the difference in environmental policy stringency between the domestic and first host country in case of RHCs. Specifically, CSR-signalling MNEs tend to repatriate towards more stringent nations (delta stringency between home and first host country = 0.119) compared to firms not publishing a sustainability report (delta stringency between home and first host country = 0.039). This evidence lays the foundations for testing our second hypothesis.

4. Results

4.1. Main results

Being our dependent variable (RHC) a dichotomous one, we tested our hypotheses performing a set of robust probit models; [Table 6](#) shows the results.

Regarding the controls, our dependent variable seems not to be affected by productivity-enhancing and strategic-asset seeking

⁶ For these variables, the advantage is reflected by a lower value of the proxies.

⁷ [Kogut and Singh's \(1988\)](#) composite index encompasses the four cultural dimensions identified by [Hofstede \(2001\)](#), namely Power Distance, Uncertainty Avoidance, Masculinity or Femininity and Individualism or Collectivism. The control variable *Cultural distance* was computed as the difference between the value of Kogut & Singh index in the home country and the one in the first host country.

Table 2
Correlation matrix and main descriptive statistics.

	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)	12)	13)	14)
1) RHC	1.000													
2) Home country environmental policy stringency	0.043	1.000												
3) Sustainability report	-0.005	0.229	1.000											
4) Home country labour cost	0.046	0.687	0.145	1.000										
5) Host country labour cost	0.038	0.656	0.088	0.705	1.000									
6) Home country market-seeking advantage	-0.044	0.635	0.019	0.653	0.658	1.000								
7) Host country market-seeking advantage	0.087	0.447	-0.147	0.400	0.660	0.540	1.000							
8) Home country productivity-seeking advantage	0.000	0.750	0.035	0.706	0.743	0.888	0.513	1.000						
9) Host country productivity-seeking advantage	0.078	0.411	-0.122	0.451	0.664	0.524	0.920	0.527	1.000					
10) Home country strategic asset-seeking advantage	-0.162	0.351	0.050	0.066	0.187	0.272	0.236	0.225	0.184	1.000				
11) Host country strategic asset-seeking advantage	-0.023	0.188	-0.177	0.083	0.270	0.249	0.614	0.199	0.487	0.256	1.000			
12) Financial crisis	0.167	0.634	0.045	0.719	0.718	0.703	0.494	0.784	0.449	0.114	0.230	1.000		
13) Firm size	0.192	-0.064	0.287	0.015	-0.045	-0.062	-0.172	-0.110	-0.137	-0.179	-0.171	-0.122	1.000	
14) Cultural distance	-0.014	-0.083	0.081	-0.100	-0.068	0.006	0.008	-0.080	0.010	0.040	0.015	-0.005	-0.077	1.000
Observations	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Mean	0.307	3.030	0.460	0.137	0.113	0.037	-0.010	0.076	0.064	0.254	0.016	0.527	0.046	-0.023
Std. dev.	0.463	0.526	0.500	0.939	0.968	0.898	0.878	0.968	0.978	1.073	0.976	0.501	1.239	1.035
Min	0.000	1.472	0.000	-1.536	-1.964	-2.866	-2.318	-3.118	-2.516	-1.975	-1.781	0.000	-0.539	-1.181
Max	1.000	4.222	1.000	2.314	2.575	2.970	2.617	2.647	2.211	2.638	2.806	1.000	8.446	6.602

Table 3

Description of the sample according to the type of relocation and firms' sustainability orientation.

Type of relocation	CSR-signalling MNEs		Non-CSR-signalling MNEs		Total	
	No. of announcements	%	No. of announcements	%	No. of announcements	%
RHC	21	45.7 %	25	54.3 %	46	100.0 %
RTC	48	53.8 %	56	46.2 %	104	100.0 %
Total	69	46.0 %	81	54.0 %	150	100.0 %

Table 4

Distribution of relocation announcements according to the industry.

NACE code	Description	Announcements	RHC
29	Manufacture of motor vehicles, trailers, and semi-trailers	25	10
20	Manufacture of chemicals and chemicals products	19	8
10	Manufacture of food products	21	6
28	Manufacture of machinery and equipment n.e.c.	15	4
22	Manufacture of rubber and plastics products	8	3
31	Manufacture of furniture	4	3
13	Manufacture of textiles	3	2
27	Manufacture of electrical equipment	19	2
30	Manufacture of other transport equipment	6	2
17	Manufacture of electrical equipment	7	1
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	6	1
26	Manufacture of computer, electronic and optical products	6	1
32	Other manufacturing	6	1
15	Manufacture of leather and related products	3	1
24	Manufacture of basic metals	2	1
Total		150	46

Table 5

Geographical distribution of relocation announcements in home, first host and second host country.

Country	Home country	First host country	Second host country
AUT	3	6	6
BEL	6	15	3
BGR	0	0	1
CHE	6	0	1
CZE	0	6	10
DEU	44	16	24
DNK	2	5	3
ESP	2	9	3
EST	0	2	1
FIN	19	6	4
FRA	13	28	8
GBR	14	10	7
GRC	0	0	2
HUN	0	9	7
IRL	0	4	1
ITA	6	11	6
LTU	0	0	2
NLD	8	3	7
NOR	3	1	0
POL	0	3	23
PRT	0	0	4
ROU	0	2	11
SVK	1	1	8
SVN	0	0	0
SWE	23	13	6
YU	0	0	2
Total	150	150	150

considerations. The negative and significant ($p < 0.05$) coefficient of *Host country labor cost* suggests that an increase in the cost of labor of the first offshoring country increases the propensity of MNEs to move to a third country rather than returning back home. Even if we lack specific information about the inherent motivations behind the decision of the company to head to the first offshoring nation, this result might suggest that searching for low-cost resources could be one of the reasons encouraging the company to pursue an internationalization strategy. This result is coherent with Barbieri et al. (2019), who find that cost-saving MNEs tend to be footloose firms

Table 6
Results of the robust Probit models (dependent variable: RHC).

Variables	Model I	Model II
<i>Sustainability report</i>	-0.401 (0.387)	-5.698** (2.642)
<i>Home country environmental policy stringency</i>	0.935* (0.547)	0.277 (0.648)
<i>Sustainability report*Home country environmental policy stringency</i>		1.737** (0.866)
<i>Home country labor cost</i>	-0.634 (0.391)	-0.681* (0.387)
<i>Host country labor cost</i>	-1.478** (0.583)	-1.130** (0.548)
<i>Home country market-seeking advantage</i>	-0.801* (0.414)	-0.769* (0.428)
<i>Host country market-seeking advantage</i>	0.671 (0.606)	0.399 (0.601)
<i>Home country productivity-enhancing advantage</i>	-0.575 (0.352)	-0.701 (0.633)
<i>Host country productivity-enhancing advantage</i>	0.160 (0.490)	0.250 (0.515)
<i>Home country strategic asset-seeking advantage</i>	-0.138 (0.193)	-0.100 (0.199)
<i>Host country strategic asset-seeking advantage</i>	-0.214 (0.222)	-0.280 (0.229)
<i>Financial crisis</i>	6.306** (2.781)	6.228** (2.621)
<i>Firm size</i>	0.653*** (0.177)	0.654*** (0.172)
<i>Cultural distance</i>	-0.009 (0.156)	-0.003 (0.155)
Number of observations	150	150
Chi-square	57.29**	58.81**
Pseudo R ²	0.3226	0.3492

Standard errors in parentheses.

- * p < 0.1.
- ** p < 0.05.
- *** p < 0.01.

that are continuously in search for resource-seeking location advantages across different countries. As far as the temporal dimension is concerned, the variable *Financial crisis* shows a positive and significant ($p < 0.05$) relationship with *RHC*, thus suggesting that the likelihood of repatriation increased in the years following the 2007/08 economic crisis. Additionally, the positive and significant ($p < 0.01$) coefficient of the variable *Firm size* points out that larger firms are more inclined to perform a relocation to their domestic boundaries, suggesting that putting a stop to international commitment demands a greater amount of resources. The dependent variable seems not to be influenced by industry-level dynamics expressed by the industries' dummies.

Concerning *H1*, we employed *Sustainability report* and *Home country environmental policy stringency* as main explanatory variables (see Model I). As it is possible to infer from our estimates, the variable *Sustainability report* displays a negative, but not significant correlation with our dependent variable. CSR-signalling MNEs are not more likely to turn back home rather than divest and re-enter in a new foreign market, rejecting our first hypothesis.

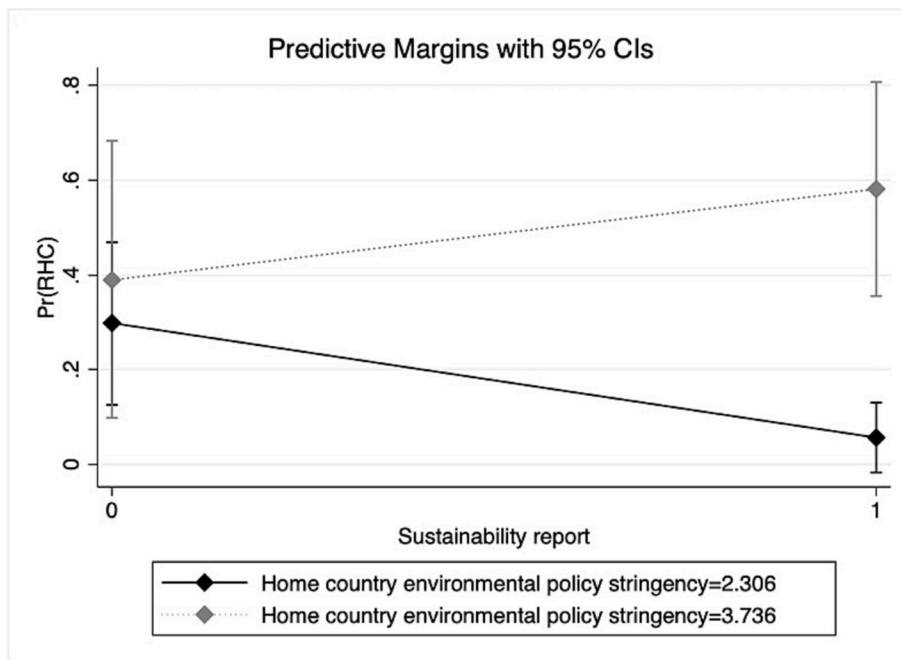


Fig. 2. Moderating effect of environmental regulatory stringency in the home country on the association between RHC and the publication of a sustainability report. Home country environmental stringency takes the values of 2.306 (“low”) and 3.736 (“high”).

Conversely, the coefficient of our second explicative variable, *Home country environmental policy stringency*, appears to be positive and significant ($p < 0.10$), thus revealing that MNEs have a higher propensity to reduce their international exposure and move activities to stringent headquarters' countries even when no discrimination is made according to their CSR orientation. This preliminary result hints at the moderating effect that the institutional environment might have on the relationship between the chosen relocation option and disclosure of sustainable information.

Next, we ran Model II to assess the potential effect that stringent environmental laws in the home country might have on the internationalization strategy of MNEs committed to social and environmental issues. The outcome is extremely interesting: being the coefficient of the interaction term positive and significant ($p < 0.05$), firms that attach greater priority to sustainability issues are more likely to exit from foreign markets and move back to their country of origin if the latter imposes strict environmental policies. In view of the application of a nonlinear model, to provide a better understanding of the interaction effect produced by the environmental legislative setting, we report in Fig. 2 the predicted probability of RHC as a function of *Sustainability report*, contingent on *Home country environmental policy stringency*, taking the values corresponding to the 10th (2.306) and 90th (3.736) percentiles of the distribution. The figure illustrates how, when *Home country environmental policy stringency* takes a low value, a one SD increase in the value of *Sustainability report* results approximately in a 81 % decrease in the probability to perform an RHC (from 29.7 % to 5.6 %). Conversely, when *Home country environmental policy stringency* takes a high value, a one SD increase in the value of *Sustainability report* results in a 49 % increase in such probability (from 39 % to 58.2 %). These results confirm H2, which proposed a moderating role played by environmental regulatory stringency on the type of internationalization choice implemented by CSR-signalling MNEs.

4.2. Robustness checks

To further test the robustness of our baseline findings, we performed a set of additional analyses employing a different array of control variables. First, we run again Model I and II yet trying to capture the motivations underlying the first offshoring decision, thus the market-seeking, cost-saving, productivity-enhancing and strategic asset-seeking advantages of the first host country with respect to the home country. To do so, we employed *First host market-seeking advantage over the home country*, *First host productivity-enhancing advantage over the home country* and *First host strategic asset-seeking advantage over the home country*, that have been computed, for each observation, as the difference between the value of each previously defined metric for the first host country and the home one. Differently, the variable *First host cost-saving advantage over the home country* has been computed as the difference between the home country and the first host country in the unitary labour cost since the higher the unitary labour cost in home country compared to the first host one, the greater the cost-saving location advantage of the latter with respect to the former. All values have been determined using the average over the three years prior the firm's announcement of the relocation event. Results are reported in Table 7 and they confirm the positive moderating effect of the stringency of environmental policies in firms' headquarter nation on the relationship between our main dependent (RHC) and explanatory (*Sustainability report*) variables.

Second, we substituted controls with four new variables describing the attractiveness of the first offshoring country compared to the second host nation (which correspond to the home one in case of RHC). More specifically, we included *First host market-seeking advantage over the second host country*, *First host productivity-enhancing advantage over the second host country*, *First host strategic asset-seeking advantage over the second host country* and *First host cost-saving advantage over the second host country*. They have been computed following the same approach used to account for the location advantage of the first host country over the home country in the prior robustness analysis. Results are displayed in Table 8 and once again, we found a positive and significant ($p < 0.05$) coefficient of the interaction term, therefore the positive moderating effect of home countries' environmental policy stringency on the linkage between the publication of a sustainability report and RHC is validated.

Finally, we have performed the main analysis including some additional observations concerning relocations involving non-EU countries.⁸ Results, which are available upon request, confirm our main findings, corroborating the moderating role of environmental policy stringency in the home country on the relationship between firms' CSR signalling and the likelihood to engage in an RHC. Indeed, when strict environmental policies in the home country are enforced, MNEs' that disclose non-financial information are more inclined to relocate in their headquarters' country compared to non-CSR-signalling organizations.

5. Discussion and conclusion

Concerns over the traditional globalization trend, the nature of global strategies (e.g., evolution, introversion, revolution) (Cha, 2020, p. 1) and awareness of the sustainable quandary have started to mark internationalization trajectories and decades of offshoring operations. Consistently, the main thesis underpinning this study relates to the revolutionary power of CSR signalling by means of sustainable disclosure to affect companies' revision of their international portfolio of production activities and to the moderating effect exerted by the degree of environmental policy stringency in a country. Results of our analysis provide insightful remarks on the association between firms' sustainable awareness and post-offshoring strategies and how it changes with the intervention of inter-

⁸ As mentioned in the database description, we excluded observations for which the home, first host, and second host country are non-European nations as the ERM mainly identifies intra-EU cross-border movements. The capacity of the ERM to pick reshoring events from non-EU countries back to Europe is restricted and as such, the bulk of reshoring flows captured in the ERM are intra-EU (ERM, 2013). Additionally, reshoring events back to non-EU countries are not captured by the ERM. Therefore, not only this constitutes a limitation, but also the inclusion of any non-EU observations would create a distortion in the sample used for analysis.

Table 7

Results of the robust Probit regression with the location advantages of the first host over the home country (dependent variable: RHC).

Variables	Model I	Model II
<i>Sustainability report</i>	−0.337 (0.349)	−5.548** (2.638)
<i>Home country environmental policy stringency</i>	0.029 (0.446)	−0.659* (0.590)
<i>Sustainability report*Home country environmental policy stringency</i>		1.692** (0.864)
<i>First host cost-saving advantage over the home country</i>	0.223 (0.218)	0.166 (0.209)
<i>First host market-seeking advantage over the home country</i>	0.770** (0.341)	0.724** (0.348)
<i>First host productivity-enhancing advantage over the home country</i>	−0.287 (0.289)	−0.259 (0.290)
<i>First host strategic asset-seeking advantage over the home country</i>	0.069 (0.183)	−0.037 (0.182)
<i>Financial crisis</i>	0.055 (1.199)	0.312 (1.177)
<i>Firm size</i>	0.540*** (0.171)	0.560*** (0.152)
<i>Cultural distance</i>	0.083 (0.123)	0.086 (0.127)
Number of observations	150	150
Chi-square	52.72**	59.77***
Pseudo R ²	0.2610	0.2940

Standard errors in parentheses.

* p < 0.1.

** p < 0.05.

*** p < 0.01.

Table 8

Results of the robust Probit regression with location advantages of the first host over the second host country (dependent variable: RHC).

Variables	Model I	Model II
<i>Sustainability report</i>	−0.398 (0.410)	−6.314** (2.863)
<i>Home country environmental policy stringency</i>	0.493 (0.527)	−0.241 (0.660)
<i>Sustainability report*Home country environmental policy stringency</i>		1.927** (0.944)
<i>First host cost-saving advantage over the second host country</i>	−0.022 (0.221)	−0.777 (0.218)
<i>First host market-seeking advantage over the second host country</i>	−0.247 (0.515)	−0.383 (0.520)
<i>First host productivity-enhancing advantage over the second host country</i>	−0.526 (0.446)	−0.384 (0.458)
<i>First host strategic asset-seeking advantage over the second host country</i>	−0.322 (0.217)	−0.408* (0.219)
<i>Financial crisis</i>	0.047 (1.210)	0.128 (1.151)
<i>Firm size</i>	0.726*** (0.241)	0.754*** (0.227)
<i>Cultural distance</i>	0.221 (0.183)	0.279 (0.185)
Number of observations	149	149
Chi-square	62.13***	73.38***
Pseudo R ²	0.4140	0.4469

Standard errors in parentheses.

* p < 0.1.

** p < 0.05.

*** p < 0.01.

organizational factors, such as countries' regulatory frameworks.

First, MNEs' signalling of their sustainable orientation to stakeholders seems not to be enough to trigger an adjustment of their internationalization blueprint in favour of either RHC/RTC. This finding indicates that the firm-level dimension of sustainability might suit a relocation both to domestic territories – i.e., a global strategy introversion - and to further distant countries – i.e., a global strategy evolution, thus suggesting the need to adequately disentangle the connection between the sustainability trend and RSD. The publication of a sustainability report does not directly increase the probability of undertaking an RHC. Echoing previous literature exploring the relevance of the institutional environment as determinant driving relocation (Kostova, 1999; Wijen and Van Tulder, 2011; Witt, 2019), we advance our research by leveraging on environmental regulations' degree of stringency as a potential country-level variable reinforcing the positive signalling effect of sustainable reporting. The interposition of this parameter does remodel CSR-signalling MNEs' strategy in approaching a relocation of cross-border manufacturing activities towards RHC when the domestic regulatory setting from an environmental perspective is demanding. As originally envisaged, MNEs that have published a non-financial report, showing a superior commitment to the advancement of their sustainability profile, do not perceive more rigorous environmental laws as a cost, but rather as an opportunity to operate in a legislative context that allows the fulfilment of their stakeholders' CSR expectations. Contrary to the rationale underlying the pollution-haven hypothesis, the emergence of strict environmental policies might be recognized as a home-country location advantage by firms caring about stakeholders' needs. CSR-signalling firms might be in the place to exploit environmental subsidies and incentives and therefore, more willing to move production activities in countries that grant them this opportunity. Overall, the home-country location advantage identified where policies are designed to advise a more ethical way of doing boosts the likelihood of making a stop to further cross-border expansion and make CSR-signalling enterprises able to afford a relocation back home. This is in line with prior studies who finds in the home-country political environment the ability to reverse the internationalization path of firms investing abroad (Barbieri et al., 2022) and in institutional idiosyncrasies the power to affect international operations (Foroudi et al., 2021). It is when the home country enforces tighter environmental regulations that CSR-

signalling MNEs find in RHC a chance to cultivate their portrayal as eco-friendly firms, thus recognizing the benefits hidden in higher CSR accountability and transparency towards a large array of stakeholders. As expected, repatriation to strict domains reinforce a signal that conveys credibility to MNEs' public perception as actors that positively partake in the fight against environmental degradation. Conversely, a shrink in international exposure towards lenient environmental standards would hamper any benefits stemming from the alignment to CSR stakeholder expectations. If MNEs' headquarters are situated in poor regulated nations, a pull-back from international manufacturing would not be appraised by thoughtful consumers as a proactive ethical manoeuvre, albeit undermining the sustainable profile of CSR-signalling organizations.

Shirking one's international scope permits a reduction of the physical length of firms' supply chain conducive to emissions and social frictions abatement and reduction of adverse environmental impact. However, it is the combination with a more demanding domestic regulatory setting the tool that magnify the credibility of MNEs exhibiting sustainable orientation, thus providing a compelling signal to the market which can be exploited for sustained competitive advantage and value-creating purposes.

5.1. Theoretical and practical implications

We believe that the insights gained from this study have a threefold contribution for the IB literature. First, by addressing changes in the depth and spread of firms' international blueprint, this paper adds a new piece of knowledge to the strand of literature on non-linear, forward-moving internationalization processes (Welch and Welch, 2009; Vissak and Francioni, 2013). Prior research has largely focused on gradual and orderly increase of resource commitment in foreign markets, at the expense of multinationals' choice to unconventionally divest or re-enter in certain environments that has been gathering growing scrutiny in the recent past (Kafourous et al., 2022). Notably, by addressing the so-called RSDs, we complement earlier studies on back-shoring and relocations to third new markets, that are an understudied aspect of cross-border trajectories (Fratocchi et al., 2016; Barbieri et al., 2019; Barbieri et al., 2022; Di Mauro and Ancarani, 2022). Relatedly, we contribute to advance the nascent debate on MNCs' global strategies and their evolution and introversion (Cha, 2020), by combining fruitfully different research streams and theories (i.e., stakeholder theory, signalling theory) to build new insights on how the global strategies of MNCs are being revolutionized by CSR practises.

Second, by discussing the sustainability thematic, this work answers the call to supplement IB literature with the incorporation of grand challenges, like climate action and environmental exploitation (Montiel et al., 2021). Sustainability has become a central pillar for the majority of enterprises, but little is known about how social and environmental aims are translated into internationalization design. We put forward a new factor whose acknowledgement might lead to the introversion or the revolution of the global strategies and propose the political framework as a mechanism to decode MNEs' progressive international introversion. Social and environmental domains may not be yet appraised as drivers of relocation decisions, but we believe that, by exploring how environmental policy stringency intervenes to alter the relocation choice of those firms that demonstrated a CSR commitment, our paper yields first evidence on the need to widen this nascent line of research.

Finally, we contribute to the reshoring literature by suggesting a new theoretical logic to interpret multinational firms' behavior. While reshoring initiatives have been typically analysed resorting to traditional perspectives based on transaction costs and resource-based view (Barbieri et al., 2018), we leverage on stakeholder and signalling theory to study relocation movements. The former has long been applied in an array of settings to explain firms' CSR practices and performance, and internationalization strategies are not exempted from affecting and being affected by stakeholders' interest and expectations, including the ones for sustainable and responsible behaviours. We then complement stakeholder theory with signalling theory as we reckoned that not all MNEs indistinctively react the same way to stakeholders' CSR expectations. We theorize that through the publication of a sustainability report firms attempt to send a signal and boost stakeholders' CSR expectations, which should be met in all their business strategies, therefore propping them to opt for RHC as post-offshoring choice. However, we do not find confirmation for this assumption, since the probability of returning home is triggered only by the presence of stringent regulatory regimes at home, meaning that the signal needs to be matched with the stakeholders' environment and expectations in order to be effective. This is a pivotal point of this study: that governments with their encoded laws and regulations play in concert with the wider stack of stakeholders to create a fruitful environment CSR-signalling MNEs could be attracted by. The adoption of this novel standpoint to reflect upon the evolution and introversion of global strategies might be valuable for future studies addressing post-internationalization decisions.

Our findings could be beneficial to practitioners alike. This new understanding of strict environmental laws as potential enablers of a repatriation of CSR-signalling organizations may assist policymakers in their legislative duty of designing norms and regulations to support a green transition. We are assisting to the surge of political interventions to cope with the climate and energy challenge and these results might prove to be useful in supporting the implementation of ambitious environmental laws, which could also be welcomed by entities that treasure sustainable value creation. From a managerial perspective, these new insights stress the need to genuinely reflect on the social and environmental externalities of firms' cross-border shifts and to take them into consideration along with the traditional resource and cost-based relocation motifs. First, executives in MNEs must not disregard the intensifying stakeholders' distress for the social and environmental harm caused by companies' operations when selecting the target country of (re) location decisions. Second, our findings hint at the benefits that repatriation towards high-quality institutional environments might engender for MNEs that decide to ride the de-globalization and regionalization waves. This kind of international business introversion could deliver an effective message to stakeholders and represent a key strategic lever for multinational companies to substantiate their CSR image.

5.2. Limitations and direction of future research

This paper is not without limitations, which also represent promising avenues for future research. First, we acknowledge that the analysed sample is limited to MNEs endeavoring a divestment of a foreign subsidiary and overlooks the choice not to modify the international footprint and to remain in the first offshoring country. The absence of a counterfactual of non-relocating companies poses a self-selection issue and restrains implications and prescriptions that could be derived from our findings. This study has the objective to explore the interplay between two snowballing phenomena, namely stakeholder sustainability pressure and back-shoring and it does shed light on the role of environmental policies in the selection of the appropriate RSD approach to complement CSR stakeholder expectations. However, the absence of a matching set of MNEs that stop at the first offshoring step pre-empts the assessment of the power of CSR-signalling in triggering a real change of internationalization propensity. By comparing MNEs that do adjust their international organization of production activities with those that do not perceive neither the need nor the advantage to rearrange their subsidiaries, further investigation could deepen the discussion allowing a more comprehensive understanding of the role of sustainability practises.

Second, since our data comes from secondary sources, an additional challenge stands in the collection process implemented to detect relocation events, which relies on announcements reported in the principal national media and not on restructuring that has taken place. In addition, in relation to the empirical model, we acknowledge the possibility of omitted variable bias stemming from the lack of additional firm-level controls covering firms' performance, as well as their prior internationalization experience. This might be accommodated in a future paper relying on additional data.

Moreover, the empirical test conducted is based on cross-country relocation announcements occurred just within European boundaries, in the timespan 2002–2016. We believe that expanding the geographical scope to worldwide jurisdictions, like developing countries' ones, could benefit this research by comprising divergent regulatory, political and cultural differences that could amplify the relative CSR benefits resulting from alternative patterns of internationalization. It would also be of interest to extend the temporal length of our study to more recent years, given the heightened environmental legislative panorama, coupled with an ongoing energy transition, which create a dynamic and uncertain landscape that might affect internationalization strategies. Governments' agenda is also seeing a surge of reshoring initiatives in the form of financial subsidies to incentivize domestic production, with no genuine reflection on their cross-border externalities (Mariotti, 2022). This is an issue requiring investigation, being unclear their effectiveness in the achievement of social optimum.

Future studies are also encouraged to explore diverse measures of CSR-signalling. Commitment to the sustainability cause could be operationalized resorting to primary data collected at firm-level by means of surveys administered to gather information on MNEs' environmental, social and governance culture. Alternatively, looking at distinctive environmental or social metrics, from GHG emissions, share of renewable energy to turnover rate or gender diversity could allow the construction of a multidimensional measure of sustainability aptitude to better discriminate among CSR-signalling firms. Disentangling environmental policy stringency to account for the relative weight of sanction-based instruments (e.g., taxes and charges for polluting initiatives) and reward-based ones (e.g., subsidies and incentives for energy-saving activities) also deserves further endeavour as it could inform decision-makers on the appropriate political interventions to prompt a re-composition of international value chains for sustainability motifs.

Data availability

Data will be made available on request.

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