

Intellectual capital and corporate environmental proactiveness

The growing concern of citizens and businesses on the preservation of the natural environment, together with the increasing interest of management, marketing and strategy scholars on the impact of organizations on the natural environment, led to the emergence of a body of the management literature during the nineties of the twentieth century focused on the relationship between the organization and the natural environment (Aragón-Correa *et al.*, 2016; Christmann, 2000; Hart, 1995, Porter and van der Linde, 1995). This phenomenon happened in parallel with the emergence of corporate social performance and disclosure practices, and firm awareness about the importance of public relations and image in the areas of environmental respect (Martín-de Castro *et al.*, 2016).

Academic scholars and business practitioners, mainly from management and strategic management, have explored how companies can address this important challenge and how to fit firm competitiveness and profitability to natural environment respect. From the academy, since the publication of two seminal works in 1995 (Hart, 1995; Porter and van der Linde, 1995), many efforts have been made in order to explore corporate environmentalism and its effects on business strategy (Aragón-Correa, 1998) and management. From public policy and business practitioners' spheres, initiatives such as the European Commission in 2015 on Circular Economy or the UN 2030 Agenda on sustainable development objectives show the growing importance given to the natural environment in economy, business and society.

How companies face environmental concerns determines their proactiveness towards the natural environment. In this sense, a basic distinction implies reactive versus proactive environmental strategies (Sharma and Vredenburg, 1998). Thus, on one side, a reactive environmental positioning can be understood as a strategic response to normative and stakeholders' pressures, implying many times just the adoption of market end-of-pipe technological solutions to control pollution (Hart, 1995) with little changes in the internal resource endowments and organization of the firm. This posture has been typically framed under the institutional theory (Delmas and Toffel, 2008; Bansal and Roth, 2005) as a corporate legitimizing process, and sometimes symbolic compliance, in the environmental arena. On the other side, a proactive environmental strategy puts environmental concern and pollution prevention at the heart of firm's strategy, anticipating future regulations and social trends by changing operations, process and products to prevent negative environmental impacts (Aragón-Correa and Sharma, 2003). Typically, most proactive environmental strategies have been framed under the natural and contingency resource-based view (Aragón-Correa and Sharma, 2003; Hart, 1995). This proactive positioning implies deep changes in its business strategy, structure, human resource practices, operations and business models, which require the development of environmental innovations, new management tools and the external projection of the firm and stakeholders' engagement. Thus, firms have to carry out important internal and external changes in order to develop effective proactive corporate environmentalism as the development of new environmental resources and capabilities in different business areas, such as innovation, human resources, culture, organizational routines, as well reinforcing ties with internal and external stakeholders' engagement through corporate communication and reporting, strategic alliances and networking, and improving their legitimacy and reputation.

Our proposal is that these new environmental resources and capabilities are mainly based on knowledge and are of intangible nature, where an intellectual capital-based view as a middle-range theory (Bueno *et al.*, 2014; Martín-de Castro *et al.*, 2011; Reed *et al.*, 2006)



constitutes a very well-suited theoretical perspective to give light to this emerging business phenomenon, as [Figure 1](#) shows. For example, human capital and talent management, innovation management, organizational culture and routines, social capital, as well relational issues as reputation and image, or corporate reporting ([Bueno et al., 2012](#)) are effective ways to frame and carry out proactive environmental strategies.

As [Figure 1](#) shows, the more proactively in environmental strategy, the higher the number and variety of green intellectual capital assets involved, as well has the stakeholders' engagement, internal (employees, managers and shareholders) and external to the firm, both market (customers, suppliers, competitors, Allies, etc.) and beyond the market ones (NGOs, governments, the media, etc.). This way, the increased role of social capital and openness and an intellectual capital-based view of environmental management or the attraction and retention of talented employees constituting a green human capital by proactive environmental companies are just a few examples of the relevance of the external projection of the firm.

Therefore, to develop an effective and value-creating proactive corporate environmentalism, jointly with important and necessary internal efforts putting in value and co-creation process the green human capital ([Vidal-Salazar et al., 2012](#)), environmental culture and proactive environmental management and eco-innovation efforts, managers should complement them with a clear and proactive company's environmentally friendly market external projections through the development of a green relational capital in a very active external stakeholders' engagement initiatives as [Hart's \(1995\)](#) product stewardship and sustainable development strategies suggest.

This way, managers should drive the creation of the necessary synergies between the internal environmental human, organizational and technological capital of the firm and the external company's environmental projection through a very active policy of stakeholders' engagement, environmental communication and disclosure, and the construction of a good environmental reputation, legitimacy and image ([Martín-de Castro et al., 2020](#)) in a wider green relational capital logic on which a successful environmental strategy should rest.

This way, green intellectual capital can be understood as the sum of all kinds of intellectual resources and capabilities, talent and relationships of the firm ([Chen, 2008](#); [Delgado-Verde et al., 2014](#)) responsible of an effective firm's environmental management

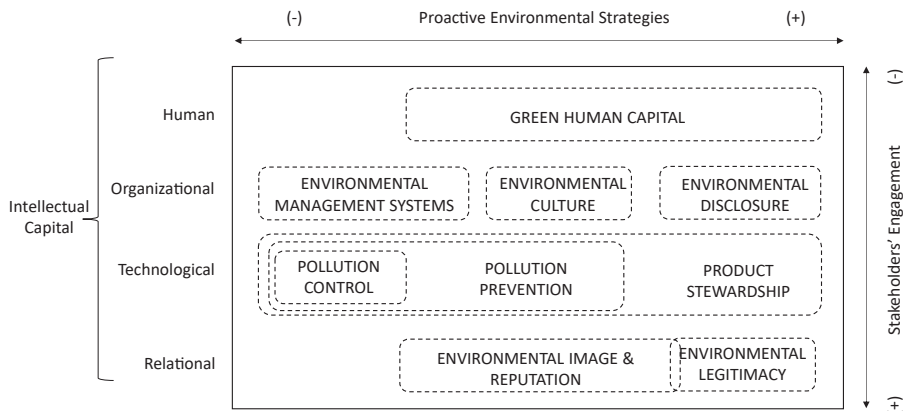


Figure 1. Intellectual capital and corporate environmentalism

Source(s): Own-elaboration

(López-Gamero *et al.*, 2011) and performance, leading to both environmental and economic sustained firm performance. Nevertheless, and despite the growing interest of environmental strategies and intellectual/knowledge assets, there is relatively little empirical research done testing it (López-Gamero *et al.*, 2011).

In this vein, in this special issue, we propose a cross-fertilized new field of research and practice by linking intellectual capital and corporate environmentalism, exploring the key issues of social and relational capital in engaging external stakeholders in the development of proactive environmental strategies (Martín-de Castro *et al.*, 2016); the development of a green culture that facilitates the effective implementation of advance proactive environmental strategies; the role of environmental legitimacy, reputation and image in both internal and external stakeholders' engagement, as well as in complementing other organizational environmental efforts and firm performance, the attraction and retention of talent and highly skilled workers and their role in environmental innovation and proactive corporate environmentalism; the dilemma and significance of environmental reporting for firm purposes; or the key role cutting-edge eco-innovations in the firm.

In the next section, we develop an integrative framework of both theoretical and empirical contributions made to this special issue, as well as future avenues of work in this productive and cross-fertilized arena of corporate environmentalism and intellectual capital.

Contributions of this special issue and future research

The six articles that appear in this special issue offer new insights on the intellectual capital-based view of environmental strategies. Together, they advance in the field, shedding new light on intellectual capital and corporate environmentalism. The first paper by Mansoor, Jahan and Riaz is entitled "Does green intellectual capital spur corporate environmental performance through green workforce?". The authors explore the relationship between green intellectual capital and environmental performance with the intervening effect of green human resource management. The study analyzes sectional data from 187 human resource directors/managers working in manufacturing firms of Pakistan through a partial least squares approach. Results show the mediating effect of green human resource management. In addition, two dimensions of green intellectual capital (green human capital and green relational capital) were found positively related to the environmental performance of the firm. Overall, interesting implications for theory and practice are shown, including the significance of green human capital as a valuable intangible asset for the achievement of environmental sustainability.

The second paper by Rodríguez-Rebes, Navio-Marco and Ibar-Alonso focuses on the influence of organizational innovation and innovation in general on eco-innovation in European companies. By means of the estimation of different binary logistic regression models with maximum likelihood applied to a sample obtained from the Eurostat's Community Innovation Survey 2014 database, the study suggests that the type of organizational innovation that is most related to eco-innovation is work responsibility and decision-making methods. The study also highlights other significant factors such as training or other aspects related to intellectual capital and knowledge management. The research advances the understanding on how organizational innovation can provide environmental benefits.

The third paper by Ali, Jun, Hussain, Khan, Younas and Jamil is entitled "Does green intellectual capital matter for green innovation adoption? Evidence from the manufacturing SMEs of Pakistan." The authors use a multiple regression analysis approach to analyze data sample of 235 SMEs, from four manufacturing sectors of Pakistan including: textile, chemical, pharmaceutical and steel. Main results show that green human capital and green structural capital significantly increase green innovation adoption in manufacturing SMEs in Pakistan. Nevertheless, green relational capital has a positive but insignificant impact on green innovation adoption. Findings in this research contribute to improve the

understanding on how to better achieve sustainable development through the influence of the different components of green intellectual capital.

The fourth paper by Castilla-Polo and Ruiz-Rodríguez focuses on the following question: “Do well-reputed companies carry out higher quality social reporting? An empirical approach.” The paper assesses how social reporting is being carried out by the companies included in the MERCO Corporate Reputation Business Monitor, MERCO Business, during the period 2014–2016, by proposing a weighted index based on two unweighted indexes related to both the quantity and the quality of the voluntary information disclosed. The study highlights that while social reporting is considerable from a quantitative perspective, quality levels are not very high. The results offer interesting potential insights between intellectual capital and social responsibility, given the complementarity of both types of disclosures.

The fifth paper by Albertini addresses “What are the environmental capabilities, as components of the sustainable intellectual capital, that matter to the CEOs of European companies?”. The author develops both a lexical and thematic content analysis of 241 letters to shareholders from the CEOs of major European companies published in 2016. The former highlights that green alliances have been developed to face the energy transition challenge by means of their manufacturing processes. The latter shows that managerial competencies, continuous innovation and stakeholder integration are crucial environmental capabilities. The study enhances the understanding on the environmental capabilities and resources that are disclosed by companies in their corporate communication.

The sixth paper entitled “Green technological distance and environmental strategies: The moderating role of green structural capital” is written by Amores-Salvadó, Cruz-González, Delgado-Verde and González-Masip. Hierarchical regression was used to analyze the impact of the environmental technological knowledge distance between the firm and the industry on the adoption of proactive or reactive environmental strategies, as well as the moderating effect of green structural capital including environmental incentives, senior environmental responsibilities and external environmental communication, in 202 manufacturing companies from Spain. Results show that the role of green structural capital is diverse and depends on the manifestation under analysis, advancing on its understanding.

Overall, this special issue contributes to advance in the cross-roads of both intellectual capital and corporate environmentalism, by analyzing both the diverse and specific roles and the interacting and complementary ones played by the main components of intellectual capital (IC): human capital, structural capital and relational capital on environmental innovation, and environmental and economic performance. Also, it puts the focus on two key related issues: IC and sustainability reporting, and their links to corporate reputation and legitimacy, and stakeholders’ engagement.

Among future avenues of research that this special issue projects, we could mention the following fruitful pathways: (1) as [Bansal \(2019\)](#) points out, more qualitative research on specific business practice to explore the nature, antecedents and consequences of corporate environmentalism, and its socially complex links to intellectual capital assets and eco-innovations; (2) the role of social capital, corporate image, reputation and legitimacy in engaging external stakeholders in the development of proactive environmental strategies; (3) to explore the nature and links between IC and sustainability disclosure, and how the firm could efficiently engage with a wider typology of stakeholders ([Barney, 2018](#)), both from the market—such as customers, suppliers, competitors, etc., and beyond the market—such as NGOs, the media, governments, local communities or the natural environment—this way exploring the market side of corporate environmentalism and (4) finally, to engage in-depth research about the key role of human capital in developing the more advanced and proactive environmental strategies, as well as how to attraction and retain talent and highly skilled workers. This way, as [Figure 1](#) shows, corporate environmental proactivity, environmental innovation and the management of intellectual capital are intimately linked.

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Gregorio Martín-de Castro

Department of Management and Marketing, Faculty of Economics and Business, Universidad Complutense de Madrid, Madrid, Spain, and

María Paz Salmador

Department of Management, Faculty of Economics and Business, Universidad Autónoma de Madrid, Madrid, Spain

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