Introduction

This book stems from long-term efforts by a team of researchers to address the overarching question of the role of border-crossing enterprises in the implementation of the various forms that corporations may wish to endow the mandate of sustainability in their network. This mandate is often recognized as most of the contents of the United Nations (UN) Sustainable Development Goals that corporate actors and allies in their extensive network may choose to undertake. The works herein contained were selected to address in innovative fashion how multinational enterprises (MNEs) and allied private sector actors respond to the range of sustainability policy and operational issues from enterprise governance to field operations. It also introduces a focus on the questions of climate change brought to the fore in some of the UN Sustainable Development Goals and the ensuing Paris Agreement. Considering the magnitude and complexity of global warming issues, this work expands its research target to any enterprise concerned by climate change issues. It has sought contributions from recognized research scholars, as well as practitioners experienced in project implementation coming from a variety of countries, thus drawing from a large cross-national array of expertise. The resulting work lies at the convergence of sustainability, corporate social responsibility, and climate change. Supporting this scholarship and this work, we wish to recognize, in particular, AUDAX (the Entrepreneurship Center of ISCTE-IUL), the ICN Business School (France), the CEREFIGE of the Université de Lorraine (France), and the Georgia Tech Center for International Business Education and Research (GT CIBER), Scheller College of Business, Georgia Institute of Technology, Atlanta, who all collaborated in elaborating this original body of scholarship, thereby adding to a growing body of literature.

One of the salient challenges confronting our era is the sustainability of global enterprises, in a context of finite resources, and the choices made by corporate decision makers to balance trade-offs in corporate and societal goals, as well as their capacity to respond meaningfully to their expanding stakeholders. This refers to economic development that meets the needs of the global population of 7.3 billion (expected to grow to over 9 billion by 2042) without jeopardizing the capacity of future generations to meet

their needs. To achieve the emerging transformation towards a more sustainable world, the main political, economic, and civil society actors are looking for global, innovative, and responsive solutions to address global climate change. A consensus, in the midst of debates, is emerging as to the immediacy of the global climate warming challenge. An ever-increasing number of regions, countries, sectors, ecosystems, and social groups are simultaneously impacted by climate change and struggling to define new societal transformation pathways in which corporate actors will assume their central place. MNEs through their integrated value and supply chains are in the forefront of climate change. Similarly, climate change is having deep impacts on MNEs activities in a wide variety of sectors and countries. Corporations deploy activities that can accelerate or slow the sustainable development process both locally and globally.

Because of these phenomena and scope of their ever-increasing size of trans-border activities, MNEs are expected to act as global environmental actors and stewards. In moving towards this equilibrium, MNEs need to focus on managing sustainable strategies, practices and models that will play a central role. Considering the magnitude of the global warming issues, this work seeks to expand its research target to any enterprise concerned by climate change issues. In this book, the authors identify new features of MNEs that are compatible with sustainable development, in general, and with the climate change issues, in particular.

MNEs also engage in innovative practices grounded in inter-, multi- and trans-disciplinarity, blending engineering, technology, organizational theories, strategic management, and environmental policies. Their corporate models, strategies, and practices can either accelerate or slow the sustainable development process of different geographies. Further, the advent of MNEs based in emerging economies creates both institutional and competitive challenges for developed world firms to change extant practices. For example, because home institutions of the emerging economy firms are often plagued by insufficient due process in conflict resolution, weak labor protection, and lack of transparency, then how do developed economy firms respond, as competitors or collaborators in the common undertaking of sustainability, when MNEs from emerging nations operate in their own domestic markets with institutional norms that are alien to them? The implications for sustainable development are considerable and there is ample room for cross-learning and reverse transfer of better practices. Contrasting US, European, and emerging nations based MNEs, roadmaps will yield innovative solutions for one of the most contentious issues of our era. The emergence of common frameworks and models for large, border-crossing firms handling sustainable development in different national economies of the world are under intense discussion at

international levels, while researchers are recognizing the role of innovative strategies, practices and models at operational levels. How well do these innovative strategic choices and practices address their sustainable development needs; how well do research directions usher in and document sustainable development?

Further, this work suggests that the differential performance across developed versus emerging economies since the global financial crisis of 2008 has exposed potential weaknesses and imperfections of advanced countries' institutions and thereby encouraged a greater emphasis in experimenting with adopting the indigenous and sustainable approaches to solving problems faced by firms in or from emerging economies. Hence, this book addresses selection questions, as exemplars, arising out of the changing practices and models MNEs choose to deploy new sustainable strategies, practices, and models.

Will there be any forward movement in strategic changes in MNE dynamics for the emerging challenges? Can these strategies, practices, and models be economically advantageous, ecologically sustainable, and socially responsible and ethically viable? How and why do the fast-changing dynamics of MNEs differ while doing business in emerging and developing economies? How do they balance and harmonize their choices across jurisdictions and geographies while absorbing technological innovations, responding to economic growth opportunities, conscious of resource efficiency and environmental protection? What are the decision-making criteria used to design new products, to develop appropriate production methods, and to reorganize distribution patterns to make both these products and the processes that support them sustainable? How are they managing such decision-making mechanisms in the present business complexities considering the political risks? When global integration has become the order of the day, then how enterprises are managing the dynamics of national responsiveness, particularly of emerging and developing countries, deserve an equal full measure of attention and research. Do their contextual, economic, ecological, or societal strategies, practices, and models play an important role in economic and financial profitability, competitiveness, market openness, policies, and regulatory adjustments as in new technical standards?

To seek some answers and contribute to an emerging body of literature, this book's architecture is divided into three parts:

Part I – Framing issues for a climate change-focused firm policy design
Part II – Ensuring environmental sustainability across industry sectors
Part III – Best implementation practices

In the following sections, we quickly review some of the highlights of the contributions in this book.

PART I – FRAMING ISSUES FOR A CLIMATE CHANGE-FOCUSED FIRM POLICY DESIGN

This part, in five chapters, addresses the research imperative of reaching beyond scientific research and seeking to solve more the immediate and practical considerations of global sustainability. It highlights the idea that Multinational Corporations cannot implement meaningful sustainability initiatives without establishing an appropriate governance system and instilling a corporate culture supportive of entrepreneurial ventures and exploring innovations in contemporary socio-economic environment. It ends by offering a new stewardship framework grounded in ethics to consider the duty of the firm in redefined rights and duties.

In the opening Chapter 1, 'Business not-as-usual to achieve SDGs under climate change,' Paul Shrivastava argues that despite 40 years of research on sustainability, most of the commonly used measures of sustainability such as pollution, population, consumption, biodiversity, and atmospheric carbon have all worsened on a global scale. This chapter suggests we must go beyond scientific research and study problems to solve what could be termed the real-world problems of global sustainability. It discusses transdisciplinary sustainability science that is impactful and responsive to stakeholders' needs. It seeks to understand better the interactions between natural and human systems in key challenge areas, including global climate change, food–water–energy, biodiversity and natural assets, environmental impacts on health, oceans, urbanization, sustainable consumption and production, and governance processes. It also discusses what is termed Future Earth's 'knowledge action networks' designed to develop transdisciplinary, stakeholder-engaged, co-designed solutions.

In Chapter 2, 'Slowing climate change: mitigating poverty and environmental degradation via strategic human resource management and responsible leadership,' Rohan Crichton, Thomas Walker, and Alpna Patel investigate the complex intertwined relationship between poverty and environmental degradation as part-and-parcel of climate change – a reality for the developing world to be recognized. Therefore, in the hope of crafting possible solutions as it relates to mitigating the risks attendant upon climate change, it makes sense to first thoroughly explore poverty and environmental degradation in the developing world. The challenge is designing policies compatible with economic development, catching up slowly with policies aimed at mitigating poverty, environmental degradation based on strategic human resource management and responsible leadership attempts. This overarching policy design goal can be addressed by asking the pointed question: how can organizations effectively mitigate poverty and environmental degradation in the developing world?

To support an answer for this question, the authors commence with an exhaustive, transdisciplinary literature review. The authors assert that a transdisciplinary approach is best served here, as knowledge garnered from a wide disciplinary basin can bring about novel solutions (Crichton and Shrivastava, 2017). As such, disciplinary knowledge from sociology, environmental science, and management were acquired, integrated, intertwined, and analyzed in the study. The study then fortifies this literature review with illustrations of responsibly led MNEs already engaged in a social and environmental trajectory, thus providing an exploratory analysis of the strength that practices like pro-environmental-social strategic human resource management and responsible leadership can have on influencing MNEs (e.g. Colgate-Palmolive Company, Caterpillar, Proctor & Gamble, Unilever, and General Electric) as they tackle climate change. The study has several implications for MNEs that, broadly speaking, can be summarized as two-fold. First, the study contributes to the redefinition of what corporate social responsibility (CSR) can mean in the battle against climate change. Second, the study redefines MNEs in terms of their capacity to help versus hinder social and environmental efforts (while still enhancing profitability) by doing business not-as-usual (e.g. through improved day-to-day business operations, policies, and processes), and essentially, creating an arena for shared value where there is space for the community and the organization (Porter and Kramer, 2011).

Chapter 3, 'Organizational design thinking for sustainability,' by Sanjeeb Kakoty starts by arguing that the end of the Second World War saw the emergence of a plethora of MNEs and international organisations led by the UN being constituted to lead the comity of nations on an agreed path of dignity and development. Around the same time, often away from the limelight, the multinational business enterprises, often unlinked and unknown to one another, quietly emerged to create wealth through expanding markets. While the national governments struggled through the maze of real politik to create a semblance of the dream of a United World Order, the MNEs went on to achieve an incredible model of a Globalised Economy and a global consumer without too many people noticing it! Soon, there was hardly any aspect of life that remained untouched by the MNEs and it was reported that the top twenty MNEs had a combined turnover that was higher than the GDP of the 100 poorest countries of the world! Interestingly, in the scheme of things as well as the legal provisions governing them, the primary responsibility of the corporation was towards its shareholders. Wealth creation was therefore aimed primarily at adding value to the shareholder and its main responsibility began and ended with its shareholders. It then realized that shareholder value creation may be achieved at the cost of social good and environmental well-being.

To overcome this problem, the concept of CSR was introduced, which would ensure that businesses would be obliged to spend a part of their profits either for the community or the environment as a part of their social corporate responsibility. But in a situation where 0.7 percent of the world population has 45.6 percent of the wealth, and where 8.2 percent of the population has control over 86.2 percent of world wealth, and if consumption levels of the developing nations were to reach the levels of the developed nations, one planet earth would not be enough! This has thrown up several existential questions. In terms of reach and efficiency, there is no doubt that the multinational enterprise would be the vehicle of choice to reach the world to its desired destination of both inclusive and sustainable development. The challenge before improvements can kick in is to bring about the required design modification in both its philosophy and its functioning and thereby create a new organizational design. Can it rise to the challenge?

In Chapter 4, 'Carbon performance of select energy intensive companies in India: a content analysis approach,' Niti Bhasin and Sangeeta Arora discuss how the far-reaching impacts of climate change have made it necessary for the global economy to transit to a low-carbon one where each of its constituents is subjected to specific constraints on its emissions. Worldwide, businesses can effect significant reduction in emissions by altering their production and consumption patterns and by adopting low-carbon processes and technologies. Indian business firms also had to face the vagaries of extreme climates threatening their very existence. To ensure their survival and future growth and in keeping with India's objective of low-carbon equitable growth and development, the companies in India are increasingly taking the responsibility of mitigating their emissions. This study attempts to explore the low-carbon activities and measures that the target Indian companies are pursuing in their endeavour to evolve into low-carbon entities. The target companies chosen belong to the industries of cement, power, or textiles. The power industry, engaged in burning fossil fuels to produce energy, accounts for the largest share of global emissions. The cement industry is another significant emitter, given its energy and fuel-intensive processes of manufacturing, storage, and distribution of cement. Finally, the textile industry is also known to generate huge emissions throughout its supply chain. Content analysis of the text communicated by the target companies is carried out to identify the diverse actions or activities undertaken by these companies. The activities are grouped into measures on the basis of similarities in their underlying plan or course of action. Using the framework of corporate adaptation strategies suggested by Hoffmann et al. (2009), each of the target company's scope of low-carbon measures (i.e. the total number of low-carbon activities being

pursued) or its extent of adaptation is determined. The measures identified are also clustered into strategies reflecting the broader objectives sought to be achieved: measures to protect the current business, measures to expand beyond the current business, and measures to share risks of financial impact. Through content analysis, an industry-wise comprehensive list of low-carbon activities and measures were prepared. For the cement industry, a list comprising 83 low-carbon activities grouped into 30 low-carbon measures was derived. The power industry's list consisted of 68 activities grouped into 27 measures, and the list for the textiles industry consisted of 71 low-carbon activities grouped into 26 measures. The study reveals a proactive approach on the part of companies belonging to the cement and power industry, whereas a relatively slower approach on the part of those belonging to the textile industry. All the target companies studied were found to be focused more on protective measures aimed at protecting their current business while simultaneously reducing their carbon footprint and the resultant financial impact of climate change. However, the focus on low-carbon expansion beyond the current business was not found to be significantly visible across all the companies studied.

In Chapter 5, 'Towards a stewardship framework of CSR: Levinas and multinational responses to climate change,' Alex Shapiro argues that Donaldson, writing in 1992, sees non-perfectionist moral languages, i.e. those that can accommodate a limited moral agency because there is a limited expectation of moral performance, as most appropriate for theorizing international corporate ethics and therefore responsibility. But we are now in a 'new historical epoch' defined by a greater set of responsibilities expected of MNEs: corporations now threatened by reputational damage and NGOs have initiated CSR programs and, increasingly, CSV investments (defined by Porter and Kramer as creating shared value, revenue-generating activities that widen the total pool of value). Internationally, governments are also calling on corporations to find business solutions to social and environmental problems, e.g. the Sustainable Development Goals. The ethics derived from non-perfectionist languages are still applicable (setting standards of acceptability, specific thresholds, definitive and determinable boundaries within which a given act may be granted ethical correctness), but they must now be applied as a supplement to some perfectionist ethics, i.e. one that fundamentally aspires to maximum moral responsibility. This ensures that corporate agents do not defer responsibility; they own their own individual responsibility for corporate effects in the face(s) of individual stakeholders. Levinas's description of the encounter with the Other as the foundational event of subjectivity – the ethical encounter – makes clear that neither responsibility nor ethics are achieved by meeting any rationally agreed upon criteria, but by engaging directly, authentically,

face-to-face with vulnerable stakeholders, and following the path revealed in this assignation of responsibility. Business ethics is not a formal framework, but ownership of the very personal relationship between corporate agents and the people that their decisions impact. Classic ethically charged dilemmas in multinational management – such as site selection for factory investment, outsourcing support networks for core operations, or jurisdiction shopping for managing regulatory costs or tax burdens – can be reconceived by analyzing them through the implications of Levinas's theory. By regarding the corporation as a steward of stakeholder well-being, the following is a selection of management implications of Levinas's prioritization of the Other: focus on responsibility to humans rather than environment or abstract issues of climate change per se; maintain flexible internal governance codes; base CSR performance incentives on measurable results and on maintenance of the stakeholder engagement process; center the stakeholder engagement process on regular, in-person dialogue with the most vulnerable stakeholders; pursue a 'radically' emergent corporate strategy that listens not only to rank-and-file employees, but also to stakeholders well outside the corporate boundary; and internalize the infinite responsibility the corporation has to all of its stakeholders, both in time and magnitude. Placing the ethical moment of encounter between the self and other at the center of corporate strategy will lead to greater authenticity of responsibility in all corporate activities and bearing. This may require concessions to maximum profitability in certain cases. But the wager of inverting the self–other relation at the heart of traditional capitalism is that it will unlock creativity and innovative thinking for projects that not only create shared value, but generate abnormal returns in doing so. Perhaps not yet, but a time could be approaching when that company gains the greatest competitive advantage which, paradoxically, submits itself most vulnerably, most infinitely, to the demand made on it by the other of its face-to-face engagement – the corporation who is ultimately the most responsible steward of its own stakeholders.

PART II – ENSURING ENVIRONMENTAL SUSTAINABILITY ACROSS INDUSTRY SECTORS

This part deals with how Environmental Sustainability is addressed across the industry sectors. Particular attention is given to banking firm motivations and strategies that put environmental sustainability in the first line of preoccupations, and also to the oil industry as one of the most powerful business sectors and one of the largest global greenhouse gas emitters.

Many important topics such as consumer responses to perceptions of CSR through an extensive literature review, CSR, reputational risk, and the environment and evaluation of CSR perceived image are addressed in this part.

In Chapter 6, 'Climate change and strategic social responsibility positioning of multinational enterprises in the finance sector,' Manuel Pacheco Coelho argues that according to the Green Paper of the European Commission 2001, Social Responsibility conceptualization is associated with the idea of companies deciding, on a voluntary basis, to contribute for a fairer society and a cleaner environment. The tradition of social intervention in Portugal goes back to the fifteenth century and the Foundation of Mercies. However, environmental goals were never proposed as fundamental objectives in the positioning of CSR, given the delay of the industrial development. In spite of the tradition of practice, in an informal way, of social protection by the multinationals and other companies of larger dimension, the appearance of 'social responsibility' as an autonomous management theme took, to some of these enterprises, the interest in environmental subjects. The CGD (Caixa Geral de Depósitos) is an example of this posture. In 2009, it adhered to the Environmental Program of the United Nations for the Finance Sector (UNEP FI), becoming the first Portuguese bank to do part of this program. UNEP FI reflects the recognition of the role of this sector in the promotion of Sustainable Development – market intermediation processes have effects on investment programs and, in indirect way, impacts in the allocation of natural resources and, ultimately, social tissue evolution. Scientific evidence of climatic change suggests a group of environmental, economic, and social impacts, affecting CGD collaborators and customers, all over the world. An economy of smaller emissions of GHG must be built. This reality alters the logic of the economic decision, imposing new models of investment and risk management, and at the same time it motivates new markets (renewable energies) and new financial solutions. CGD recognized this situation as an opportunity, and since 2007 it has promoted the 'Zero Carbon' Program to contribute to environmental impact reduction of their activities and induce good practices to their collaborators, customers, and society in general. The purpose of this chapter consists of evidencing the perspective of the environmental sustainability that shapes the most general concept of CSR and, through this case of a multinational, to evaluate the potentialities and fragilities of social responsibility in this domain in Portugal. The chapter discusses the problem with a simple model derived from the Dorfman-Steiner publicity model where publicity is substituted by social responsibility expenditure. The CGD case is used to check the results of the model adaptation and application and to highlight climate

change as an important thread for the development of social responsibility programs.

In Chapter 7, 'Evaluating perceived CSR image in Brazil and Portugal in the food and drug retail industry,' Ana Brochado, William Saung Woo Kang, and Fernando Oliveira-Brochado point out that MNEs operate in a global environment comprising business, social, environmental, and political forces. Firms' internationalization can be associated with increasingly diverse stakeholders whose interests need to be taken into account, and internationalization is therefore often accompanied by increased CSR. Stakeholder management is commonly regarded to be an important component of CSR strategies, offering managers tools with which to identify the needs and wants of each stakeholder and to identify how their firm's portfolio can satisfy these needs and wants. The literature reveals that important stakeholders can be customers, shareholders, supervising boards, employees, societies, competitors, governments, and suppliers – all of whom are increasingly demanding that companies engage in CSR activities. Perceived CSR image among companies' stakeholders has recently attracted more interest in the literature. In this context, the present study sought to test whether consumers have a different perception of the CSR image of companies that have been recognized as benchmarks in the implementation of CSR strategies versus consumers' perception of the CSR image of firms that have not achieved the same recognition. This research examined data on multinational companies from the food and retail industry listed in the 2013 Dow Jones Sustainability Index for Portugal (i.e. Pingo Doce) and Brazil (i.e. Pão de Açúcar). The main objective of the study was to assess whether the perceived CSR image among consumers in the home country of these companies differs from the perceived image of other companies that have not been certified. The data on consumers were collected via a survey in both countries. The sample included individuals from Generations X and Y who live in Brazil or Portugal and shop in food retailers. The results reveal that Pão de Açúcar has achieved a significant advantage in its perceived CSR image compared with its competitors in Brazil and that Pingo Doce's CSR image is undifferentiated from its competitors' CSR image in Portugal. Societal issues received scores with the highest mean gap between certified and uncertified retailers. Although both companies are listed in the Dow Jones Sustainability Index, Pão de Açúcar may be leveraging its perceived CSR image position better with its customers and, consequently, creating a stronger competitive advantage over its competitors than Pingo Doce. The findings indicate that getting a CSR certification by itself may not ensure a stronger perceived CSR image among consumers.

Chapter 8 takes the form of a detailed field and case study. In

'Sustainable competitiveness: powering 'sustainability' through Investors in the Environment (iiE) initiative at Riverside Bakery,' Jerome Baddley, Amit Arora, Anshu Arora, John R. McIntyre, Petra Molthan-Hill and Reginald Leseane highlight the role of environmental laws and legislation in achieving sustainability for the food industry. The authors present a real-life case study of a food sector company, Riverside Bakery, a subsidiary of the Pork Farms group from the UK, illustrating carbon footprint calculations within the regulatory framework of the UK government. They illustrate how to measure and calculate the carbon footprint of a company on the basis of scope I, II, and III emissions by identifying and quantifying all sources of energy consumption. Their calculations indicate a 9.56 percent decrease in carbon footprint of the company compared to the baseline year. The calculations illustrated in the case study can be replicated by companies in emerging economies using country-specific conversion factors. Since small companies in emerging economies lack the resources and knowledge to implement sustainability initiatives, our case study can serve as a small step for these companies towards the ultimate goal of becoming environmentally sustainable and reducing their carbon footprints. Previous research suggests that small and medium enterprises (SMEs) possess various organizational characteristics for promoting and implementing internal sustainability related practices, but lack capabilities for external communication and reporting. On the other hand, such SMEs while transitioning to large MNEs develop capabilities to promote external communication and reporting but find themselves constrained in internal implementation due to their increased size. The chapter provides a road map to measure and manage the carbon footprint of easily identifiable major emission sources in a SME, which can continue to be monitored as the company grows and expands internationally; thus, delivering financial benefits even after the transition phase.

In Chapter 9, 'Setting a value chain through integrated supply chain in Indian agribusiness – the Indian Tobacco Company way,' Sanjay Bhāle and Sudeep Bhāle discuss food production and its efficient distribution as a critical issue the world over. There are a lot of changes happening in global markets especially in the emerging market economies as compared to more industrialized Organisation for Economic Co-operation and Development (OECD) countries in the context of food production and its supply. In recent years, these markets have witnessed explosive growth of the middle class, driven by greater industrialization and urbanization. An emerging middle class creates changing dietary habits, such as consuming more carbohydrates, a fibrous diet, and fresh organic food. This whole phenomenon is more resource-intensive, which puts local supply chains under greater pressure. These factors, combined with climatic uncertainties in the regions,

make the production and distribution of food a critical issue. However, the issue can be addressed if a viable value chain is established. A value chain denotes integration of different levels of production and distribution in a manner that adds value to the product at each step by attaining process specialization and quality improvement. The improvement in efficiency is derived from the factors related to production and carries importance for future competitiveness of the product. This chapter is of qualitative type that aims to highlight the significant aspects of value chain building in the market of agricultural produce. It discusses the concept with the help of a case where an enterprise has created a system helping farmers to build capabilities in agricultural produce. It highlights key initiatives taken by an Indian enterprise, ITC, to establish a structured approach of value chain in agri-business through collaboration. Collaboration among the various stakeholders along the food value chain is more important than ever. The interdependencies between stakeholders are no longer in silo, mainly because most functions are closely linked along the chain. This model also encompasses stakeholders anywhere in the network. It also maintains a regional balance by focusing on strategic alliances between big as well as small farmers, storing/processing units, and distribution and sales enterprises that seek to create more value of the front end (farmers) of the chain and operate efficiently with a chunk of other farmers to create significant volume, which in turn creates economies of scale.

PART III – BEST IMPLEMENTATION PRACTICES

This part presents many 'best practices' such as the opportunities of smart technologies implementation for industrial symbiosis relationships and provisions especially directed to the environmental nature of provisions. It also highlights some critical elements that have not been sufficiently taken into account in discussions addressing societal issues as business. It concludes by addressing the case of the Blue Economy in order to identify the dimensions impacted by the action of one important actor and by examining how new small solar firms challenge MNE utilities with new types of service-based business models, and how the MNEs respond to meet the new competition.

In Chapter 10, 'New trends in public accounting in Portugal: the particular case of provisions, contingent liabilities, and contingent assets,' Maria da Conceição da Costa Marques discusses the new aspects of public accounting. The current tendencies in public accounting are based on a conceptual framework consisting of a set of inspiring principles of accounting standards and practices, according to which entities subject

to public accounting should prepare the financial information with the objective of obtaining an Image of reality. Accounting can play an important role in supporting, collaborating, and coordinating between different partners, with the participation of stakeholders and citizens in decision-making processes. Modern public sector management relies on management information systems that enable accurate, reliable, and up-to-date information on the state and the economic and financial performance of the states on the same terms as any other economic entity. International Public Sector Accounting Standards (IPSAS) are the standards to achieve these objectives. IPSAS 19 proposes to define provisions, contingent liabilities, and contingent assets, as well as to identify the circumstances under which provisions should be recognized, how they should be measured, and what disclosures should be made about them. This rule should be applied in accounting for provisions, contingent liabilities, and contingent assets by entities that prepare and present financial statements in accordance with the accrual regime (except for the exceptions and exclusions provided for in the standard) and apply to all entities of the public sector that are not Government Business Enterprises. The main theme of this study is the new aspects of public accounting and IPSAS 19, and concerns provisions, contingent liabilities, and contingent assets. In the case of provisions, these are reflected in the Balance Sheet and Income Statement, while liabilities and contingent assets are disclosed in certain circumstances in the notes to the accounts.

In Chapter 11, 'Techniques for navigating the risks of investing in cleaner energy technologies,' Alfred Marcus and Joel Malen argue that for MNEs to contribute to the far-reaching commitment nations made at the 2015 Paris Accord on Climate Change, they must take up the task of introducing cleaner energy solutions. However, the efforts made by MNEs to innovate are fraught with uncertainty. Increasingly, MNEs are addressing this uncertainty by acquiring successful start-up firms working in cleaner energy technology spaces. Such firms are typically supported by venture capital (VC) funding – either from dedicated private VC firms or through VC activates of the MNEs themselves. Understanding how MNEs are able to promote the diffusion of clean energy technologies therefore requires attending to the strategies VCs and start-up firms use to navigate the inherent risks of innovation they confront. Attempting to convert society's need for cleaner energy into a business opportunity exposes such firms to formidable technological, political, and economic challenges that cannot be anticipated beforehand. In this chapter, the authors identify the steps that investors (Khosla Ventures, KPCB, Intel Capital, and Google Ventures), and young firms (First Solar, Suntech, Tesla, and Better Place) took to make mitigate the risks. The chapter highlights the late and calculated

entry of the VCs, their diversification, and the side-benefits for established firms like Intel and Google of having their corporate venture capital arms invest in cleaner technologies. For the start-up firms, the risk mitigation techniques that the chapter brings to light are their reliance on patient capital, the flexible business models that they used, and their ability to gain and establish stakeholder confidence by adopting staged, but achievable, goals. Important lessons for MNEs aiming to commercialize cleaner energy technologies emerge from this chapter's analysis. The uncertainty of investing in these technologies, especially in their most advanced forms, where they are really likely to make a dent in alleviating climate change, remains substantial. For MNEs to succeed in advancing the wide-scale adoption and diffusion of these technologies, they must hedge their bets. They must scan the activities of specialized ecologically devoted entities to determine where profitable opportunities may lie, broadly diversify their bets on these opportunities to assure that they have some likelihood of success, and try to secure for themselves some side-benefits in the face of inevitable failure. To build socially responsible cleaner energy businesses that enable the world to deal with challenge of climate change, they must be patient in their support, flexible in the strategies they adopt, and careful about the scope of their goals to assure that they are achievable.

In Chapter 12, 'The effects of a maritime cluster on a sustainable Blue Economy,' Thierry Houé stresses that the Blue Economy plays a critical role in the context of an overall approach to sustainable development and globalization. Oceans supply important reserves of food and provide livelihoods to many populations. The sea represents a major means of transport for the global economy and multinational enterprises. Shipping is the pivotal element in the development of world trade. The Blue Economy is complex and includes a plurality of ocean-related economic sectors and dimensions (marine engineering, aquaculture, fisheries, ecotourism, marine biosciences, etc.) that could attract more and more multinational firms. It represents many chances to innovate in a global changing world and creates billion-euro market opportunities in new areas of science and technology. Multinational firms from emerging countries or developed economies are directly affected by these perspectives, which promise to improve their growth and global efficiency, and can be turned into a sustainable competitive advantage. Considering this situation, the aim of this chapter is to show how the Luxembourg Maritime Cluster (LMC) can positively impact the Blue Economy and its growth with an idea of sustainability. For many companies, including Luxembourg multinationals operating in much diversified sectors such as finance, insurance, logistics, services or industry, membership of this cluster offers new opportunities. This network is first and foremost a means for firms to discover an

international Blue Economy in full swing, but still little known. Relations between cluster players lead companies towards innovative and sustainable development schemes in a complex and increasingly internationalized Blue Economy. The cluster structure allows firms to build relationships with new partners from diverse backgrounds (companies, institutions, associations, etc.), thus encouraging creativity in the development of new high added value activities. This structure is also fundamentally oriented towards international markets serving the opening of the Luxembourg economy and its businesses. Considered as a European maritime organization and established in 2008, the LMC is both interesting and unusual because it is located in a landlocked country with no direct access to a coastline. Using a qualitative approach, the research identifies the dimensions impacted by the actions of the cluster. It shows that some parts of the Blue Economy are more significant than others due to the influence of the cluster structure, the innovation process, and the distinctiveness of relationships. It seems that the variety of current members of the cluster, the organization of the LMC and the quality of relationships facilitate international business developments and unique innovation processes with a sustainable view in certain fields of the Blue Economy.

In Chapter 13, 'Transformation of the energy industry – from production and value chain-based towards service and network-based business models: navigating in the new sustainable energy landscape,' Jessica Lagerstedt Wadin, Kajsa Ahlgren, and Lars Bengtsson analyze the challenges that European MNEs in the electric utility industry face in the transformation of the electric utility industry, going from a production and value chain-based business model towards more customer oriented and network-based business models. More specifically, they describe and analyze how seven European MNEs respond and change business models to navigate in the new sustainable energy landscape. They use the business model innovation theory to identify patterns among MNE electricity utilities engaging in the sustainable transformation of the energy landscape electric utility industry. They identify two types of incumbent responses to the sustainable transformation of the electric utility industry: proactive and reactive Goliaths. They observe that cooperation between successful start-ups, emerging Davids, and proactive Goliaths – with new innovative business models, organizing the cooperation in separate units and disconnected from the core business – could leverage the sustainable transformation of industries.

Finally, Chapter 14, 'The potential strategic role of logistics service providers in extending sustainability to the supply chain' by Juliana Kucht Campos, Patrícia Alcântara Cardoso, Antônio Andre Cunha Callado and Maja Izabela Piecyk examines how changing the way people, companies, and governments behave is critical for mitigating the impacts of global

warming and how MNEs act as catalysts of change. Besides corporate actions, they have the power to engage business partners in initiatives for improving supply chain transparency, setting environmental and social standards, employing eco-efficient measures and technologies, and triggering joint efforts to reduce risks and improve supply chain sustainability. Given this context and based on public documents from 26 MNEs from developed and developing countries, companies' sustainable supply chain initiatives were classified into 92 specific types. Results from the qualitative analysis showed that each researched industry – Basic Material and Energy, Automotive and Commercial Vehicles, Consumer Goods, and Transport and Logistics Services – has specific characteristics in regard to supply chain efforts to mitigate climate change and improve sustainability. Furthermore, results from the quantitative analysis confirmed that MNEs have been focusing on internally focused initiatives while still lacking measures related to distribution activities. The most significant result, however, pertains to logistics service providers (LSPs). After running statistical tests, the relatively low number of sustainability initiatives undertaken by service providers compared to producers was confirmed. Nevertheless, due to their strategic supply chain position – closer to the customers and suppliers – LSPs have an opportunity to reinvent themselves in order to act as sustainability transformers in the near future. In order to play this strategic role, these companies need to first structure basic standards and policies that guide managers, employees, suppliers, and business partners to promote considerable reductions in the impact of corporate operations on people and the environment. Moreover, the alignment of a company's strategies and sustainability efforts, creation of teams to manage the issue, and promotion of internal communication and education are complementary initiatives that support motivating and changing the sector's mindset. They can also generate additional value for their customers when designing new services that mitigate climate change, drawing their attention to the chances of extending sustainability throughout the supply chain. In this sense, supply chain collaboration schemes can be triggered by LSPs, transforming this highly polluting and 'commodity-delivery' sector into an innovative and value creator.

CONCLUSIONS

This volume is part of a long-term effort by the scholars and teams and has the merit of illustrating how practitioners and scholars can build bridges in their respective approaches and sense of priorities, and how the complex questions raised by climate change and CSR require team efforts

based on multidisciplinary and cross-silo collaboration within the firms, particularly in border-crossing enterprises with complex value and supply chains as they leverage economies of scope and scale. The authors in this book, writing from various perspectives – European, Indian, American, among others – have shown that there is room to improve and create new paradigms to deal creatively with the issues that shape the world of the MNEs and the governments that have sought to regulate them and achieve ambitious goals contained in international agreements, national laws, and policies. The book contains 14 chapters and each chapter revolves around the search for the conceptual overlap between climate change, CSR, and the search for best sustainability practices. The lack of common analytical framework does emerge from the richness and diversity of contributions while, at the same time, a consensus on which variables stand out as key variables is coming to the surface. This is already impacting global management thinking while accelerating the diffusion of best practices among corporate game changers. In short, no MNE can remain long in the global arena if it has not integrated CSR into its sustainability framework. One then can speak of a paradigm shift.

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