Antecedents and Performance Outcomes of Corporate Environmental Marketing/ Management Strategies

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Abstract

Decades of environmental degradation have contributed to transitioning the sustainability discourse from the scientific and technological to the public and corporate domains. As a result, corporate organisations are under pressure to implement strategies to improve environmental and business performance and have attracted substantial attention in the international environmental corporate sustainability field. However, researchers have conceptualised sustainability vaguely, which confuses promoting best practice and advancing theory.

In light of these problems, this thesis initially employs a systematic review approach to identify gaps in the antecedents and performance outcomes of international environmental marketing/management strategies and two empirical studies focusing on firms operating in the hospitality industry to address the identified gaps. Following the Systematic Review of the literature results, the thesis addresses a major drawback identified on the way environmental sustainability is operationalised. The one size fits all conceptualisation of the environmental sustainability constructs prevents researchers from identifying the effects of certain environmental strategies and their specific facilitators.

Therefore, the second study of the thesis (Chapter 5), in light of the conflicting findings regarding the effect of sustainability strategies on firm performance, argues that a multi-dimensional environmental sustainability approach must be followed to cope with the term's multi-functionality and explain inconsistencies in the results of previous empirical studies. The hospitality industry is purposely chosen for the two empirical studies, as the wide range of activities hospitality firms' are engaged in lends itself to a holistic examination of multiple dimensions of environmental sustainability. The Natural Resource-Based View (NRBV) theory is advanced to capture the industry particularities and the current trends in the field of environmental sustainability.

In light of the negative effect of waste/ emissions strategy on financial performance revealed in study 2 (Chapter 5), the thesis moves on to suggest an alternative approach based on the 3 Rs strategy (Chapter 6). The study relies on the conjunction of the Resource-based View of the firm theory to examine the strategy's determinants and the Natural Resource-Based View to examine the effects of a 3 Rs strategy on profitability and financial market performance. The thesis has several implications on a theoretical, managerial and public policy level which are summarised in Chapter 7 in addition to providing intriguing directions for future research.

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I would also like to express my appreciation to the two examiners Dr Marios Samdanis and Dr Tiago Botelho for their valuable and constructive feedback on this thesis, which has helped me understand my research in new and exciting ways.

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1. Introduction

United Nations (UN) defined sustainable development as the processes and actions taken to meet the present's needs without compromising future generations' ability to meet their own needs (Simon, 1987). Decades of work and progress between countries and the UN led to the milestone of the subsequent adoption of 17 Sustainable Development Goals (SDGs), which span across environmental, social and governance principles. Among them, six (i.e., clean water and sanitation, affordable clean energy, sustainable cities and communities, responsible consumption and production, climate action, life on land) are directly related to the environment, while the rest are indirectly linked to the environment (GA, 2018).

The quality of human life is reliant on the natural environment, which is facing significant problems. In recent decades, the exponential growth of environmental concerns has brought together governmental, business, and civil society stakeholders aiming to control and mitigate environmental degradation (Fragouli, Ioannidis and Adiave-Gaisie, 2013; Howard-Grenville *et al.*, 2014). As a result, the sustainability discourse has gradually transitioned from the scientific and technological to the public and corporate domains (Stephanides, K. Chalvatzis, *et al.*, 2019)). Corporate organizations are under pressure to implement strategies to improve environmental and business performance, which has attracted substantial attention to the marketing and management field (Tollin and Christensen, 2019). At the same time, consumers increasingly recognize the importance of environmental protection and show a preference for eco-friendly goods and services (Meise *et al.*, 2014). This is because, despite the wealth, prosperity, and growth brought by decades of industrial development, severe environmental problems (e.g., air/water pollution, global warming, soil erosion) became increasingly prominent, putting people's life quality in danger.

1.1 Field, literature, and theory this thesis attempts to contribute

In response to these trends, sustainability issues have enjoyed heightened attention by practitioners and academics alike (Kumar, 2016). Corporate responses to sustainability requirements and business research have looked into various corporate strategy aspects to

lessen their environmental footprint (Howard-Grenville *et al.*, 2014; Bhattacharyya and Cummings, 2015). The joining of multiple disciplines from natural sciences, engineering, management, and marketing is critical for addressing environmental challenges. However, this can also be a source of vulnerability, as experts from different disciplines might conceptualize terms differently as a result of their individual expertise.

Preliminary research on the subject referred to societal marketing management. In particular, Kotler and Levy (1969) introduce the concept of socially responsible marketing, subsequently drawing attention to environmental issues as part of it. Following up, Kassarjian (1971) examined the consumer reaction towards introducing an eco-friendly product from firms as part of its ecological marketing strategy, while Kinnear, Taylor, and Ahmed (1974) examined the identity of ecologically concerned consumers. In the years followed, the terminology and definitions of corporate sustainability rapidly increased with the heightened awareness of the importance of sustainability.

Key publications and specific authors have significantly influenced the field of corporate environmental sustainability. Precisely (Hart, 1995) article 'A natural resource-based view of the firm introduced a theoretical framework adopted in numerous studies in the field for understanding how firms can gain a competitive advantage through three interconnected strategies 1) Pollution prevention 2) Product stewardship, and 3) Sustainable development. The particular theory is the centre of attention in this thesis, as explained in the two empirical studies (Chapter 5, Chapter 6). Hart has also co-authored major studies in the field, such as 'Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance (1996)' where he identifies gains for firms cutting emissions with a time lag of two years. Other influential authors in the field are Sanjay Sharma, J Alberto Aragon-Correa and Paul Shrivastava. The work of Sharma and Correa on proactive environmental strategies such as 'Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities (1998)', 'A contingent resource-based view of proactive corporate environmental strategy (2003)', 'Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy (2000)', 'The Influence of Stakeholders on the Environmental Strategy of Service Firms: The Moderating Effects of Complexity, Uncertainty and Munificence (2008)', and finally 'Strategic proactivity and firm approach to the natural environment (1998)' are among the most well-cited articles in the field and provided guidance on the drivers and outcomes of firms following a proactive

environmental strategy. Another key author in the field is Paul Shrivastava, who at the same year (1995) with Stuart L. Hart, he published 'Environmental technologies and competitive advantage (1995)' and 'The role of corporations in achieving ecological sustainability (1995)' where he articulates the implications for firms following corporate environmental sustainability strategies.

The field of environmental sustainability has accumulated imperative empirical contributions, theoretical developments, and managerial implications throughout the years, mainly due to methodological advancements and increased available information inventory. However, some areas of concern merit more attention than they have received until recently, which is what this thesis contributes to. First, the central area of concern is that existing studies conceptualize corporate environmental sustainability either as part of Corporate Social Responsibility or as a uniformly unidimensional concept, thus failing to explain its different implications. Secondly, there is limited research focusing on firms with a global presence, although the environmental impact of such firms is enormous. Finally, there is a strong focus on manufacturing industries, ignoring other vital sectors of the economy such as the service industries.

1.2 Study Context

The thesis will focus on firms engaging in international activities vis-à-vis crossing their home country. The raised pressure from environmental stakeholders and particularly NGOs, along with the rise of social media platforms, redefine activism and advocacy as the ecological actions of corporations are easily and rapidly accessible to the broader public (Gomez-Carrasco and Michelon, 2017). Furthermore, an increased number of corporations, with an international presence, are engaging in the disclosure of their environmental actions as part of their sustainability reporting or as part of the Carbon Disclosure Project or other platforms, which subsequently increases available data for researchers to implement relevant studies examining the phenomenon with publicly available datasets. All in all, growing globalization trends persuaded firms with an international presence to demonstrate responsible citizenship for sustainability not only in their home market but also in host countries. Consequently, firms with international presence play a vital role in promoting an ecologically sustainable world.

In addition to focusing on firms with international presence, this thesis' empirical studies concerned firms operating in the service industry, particularly the tourism and hospitality

sectors. Although there has been extensive research on business sustainability, this has focused mainly on manufacturing firms, with the hospitality industry (and the broader service sector) receiving significantly less attention (Serra-Cantallops *et al.*, 2018). However, investigating the hospitality industry's sustainability is of paramount importance on three main grounds: (a) they collectively form a sector with a severely damaging impact on the environment through their high-intensity energy and water use, and high waste volume (Blanco, Rey-Maquieira and Lozano, 2009); (b) they are often located in ecologically sensitive areas, which are more vulnerable to the direct effects of climate change (Scott *et al.*, 2008); and (c) there is a growing ecologically-sensitive tourism market segment, which takes into consideration hotel environmental behaviour in making their buying decisions (Teng, Lu and Huang, 2018).

Over the years, the tourism and hospitality industry demonstrated remarkable resilience, despite the increasing threats of an uncertain economy, terrorism, and political instability. The broader sector generated 10.3 percent of the global GDP at US$8.9 trillion and offered approximately 10% of the global employment at 292 million jobs. Moreover, the sector's international nature delivered nearly 28.3 percent of total global service exports and 6.8 percent of total global exports (World Travel & Tourism Council, 2019). Moreover, a large part of several countries' economies relies on the tourism industry, and its magnitude is not always reflected in the policymaking and research attention it gets. Thus, researchers have termed the tourism industry as the silent destroyer of the environment (Aykol and Leonidou, 2015) as environmental regulation in the tourism sector is minimal compared to more scrutinized industries. Finally, the wide spectrum of activities performed by firms involved in the hospitality industry provides the ideal ground for a holistic approach to applying the multi-dimensional conceptual frameworks examined in the two empirical studies of this thesis.

1.3 Research Questions and the methodological choices made in this research

This thesis undertakes three individual studies to fill existing literature gaps and answer a number of research questions as presented in Table 1. The first study (Chapter 4) employs a Systematic Review analysis in the area of environmental sustainability of firms with international activities. Within the review study, I follow a content analysis of a pool of 118 papers identified in the article identification process in the extant literature of firms engaged in international business activities, marketing/management sustainability practices. In particular, the study a) identifies and analyses the theoretical background of this line of research; b)

assesses the research methodologies employed by previous empirical studies; c) identifies and assimilates the key thematic areas and specific topics addressed by prior research; d) identifies the key variables used in the existing literature, and (e) develops a comprehensive agenda for future research on the subject. This agenda is based on i) thematic area; ii) methodological; iii) research context; iv) research design; and v) variable operationalization of the future directions as identified in the articles of the last five years.

The review analysis indicated a misinterpretation of environmental strategies, mainly sourced from 1) poor conceptualization of corporate environmental sustainability, 2) atheoretical approach followed by previous research, and 3) the approach of examining mix-industry samples. That raised difficulties in understanding the antecedents and, most importantly, gave mixed signals on their outcomes. The first study results prompt that a different approach is needed to conceptualize firms' environmental strategies, using an appropriate theoretical instrument and account for particularities of different industries. On evaluating the Scope of research (Section 4.2.2) results within the systematic review, the lack of studies for multinational firms in the service industry was profound. Therefore, a study with a particular focus on hospitality firms examining different dimensions of environmental strategies and their particular antecedents and outcomes forms the third chapter of the thesis.

The second study of the thesis advances the Natural Resource-based View (NRBV) theory within the hospitality industry context. It shows that the theory can be equally applicable in the case of firms in the hospitality industry and the broader services sector by considering additional dimensions that are idiosyncratic to them. Furthermore, in light of the conflicting findings regarding the effect of sustainability strategies on firm performance, it argues that a multi-dimensional environmental sustainability approach must be followed to cope with the term's multi-functionality and explain inconsistencies in the results of previous empirical studies. For this reason, Chapter 5 conceptualized environmental sustainability into product stewardship strategies, further categorized as 1) Product Service Eco-Friendliness and 2) Green Procurement and Pollution abatement strategies, differentiated into a) Waste/ emissions management and b) Resource Efficiency practices. Using robust analytical methods, firstly, I examine the antecedents of the strategies mentioned above as individual dimensions of corporate environmental sustainability. Lastly, in response to the conflicting findings regarding the outcomes of ecologically friendly strategies, each strategy's particular effects on financial performance are examined.

The second empirical study's findings (Chapter 6) identified a conflicting relationship between waste emission management strategies and hospitality firms' resource efficiency strategies towards their short-term financial performance. Considering the enormous waste handled by hospitality firms in their day-to-day operations, the particular effects of the principle referring to the firm's Reduce, Reuse and Recycle (3 Rs) environmental strategy required further investigation. Doing so, the final study of this thesis examines the 3 Rs environmental strategy among organizations in the hospitality industry. I use the Resource-based View of the firm (RBV) theory to test the strategy's determinants and the Natural Resource-Based View of the firm to examine its impact on business performance. The study explores the effects of three major antecedents, i.e. (slack financial resources, slack human resources, green corporate governance) on deploying an environmental strategy focused on the 'Reduce-Reuse-Recycle' 3 Rs environmental strategy and examines its short-term financial (Operating profit margin) and long-term (Tobin's Q) financial effects. Both empirical studies' conceptualization frameworks were analysed using hierarchical regression analysis as an instrument to test the hypothesized patterns.

Table 1.1: Thesis' Research Questions

Chapter 4	**Systematic Review for Corporate Environmental Sustainability of International Firms**
	What are the main journal outlets in the field?
	What are the under-researched geographical areas in the field?
	What industries merit further attention for future research?
	What are the main methodological choices of existing research?
	What are the main data collection sources?
	Evaluate the validity, reliability, endogeneity and robustness tests performed in the existing literature?
	Which are the dominant theories in the field, and how those can be advanced to better explain the issues in environmental corporate sustainability research?
	What are the main topics and areas of research that have been addressed to date?
	What are the main areas of future directions suggested by authors in the existing literature?
Chapter 5	**Corporate Environmental Sustainability for Global Firms in the Hospitality Industry**
	How can the NRBV theory be modified and extended to capture the idiosyncrasies of the hospitality sector and the trends of large global firms?
	Can hospitality firms with enhanced Green human resource management deploy a stronger corporate environmental strategy in each of the dimensions of Green procurement, Product service eco-friendliness, Waste/ Emissions management, and Resource efficiency?
	Can hospitality firms with a Strategic proactive stance deploy a stronger corporate environmental strategy in each of the dimensions of Green procurement, Product service eco-friendliness, Waste/ Emissions management, and Resource efficiency?

	Can hospitality firms that set specific targets and have an environmental orientation deploy a stronger corporate environmental strategy in each of the dimensions of Green procurement, Product service eco-friendliness, Waste/ Emissions management, and Resource efficiency?
	How does each dimension of corporate environmental strategy, Green procurement, Product service eco-friendliness, Waste/ Emissions management, and Resource efficiency affect financial performance?
Chapter 6	**Reduce, Reuse and Recycle in the Hospitality Industry**
	Are hospitality firms with organizational capabilities of green corporate governance and quality assurance policies better positioned to develop a 3 Rs environmental strategy?
	Are hospitality firms with organizational resources of financial and human slack better positioned to develop a 3 Rs environmental strategy?
	Are hospitality firms adopting a 3 Rs environmental strategy having a positive impact on their profits?
	Are hospitality firms adopting a 3 Rs environmental strategy having a positive impact on their financial market performance?

1.4 Thesis Outline

Following the Introduction (Chapter 1), this thesis continues with the Study context (Chapter 2), discussing the current environmental sustainability issues. The chapter includes an introduction on the main international agreements for the environment to date and the current trends that influence corporate environmental strategy. Furthermore, a presentation of the hospitality industry as an ecosystem is included with relevant examples of environmental strategies followed by its leading firms. The third chapter, 'Research Methods', describes the rationale of the research approach followed in the thesis and then the methodology followed to systematically assess the existing literature in terms of data collection and coding. In addition, it provides details on the two empirical studies' sampling, data collection, and variables operationalization. The fourth chapter is the first study of the thesis, which systematically reviews the existing literature mainly to identify gaps in the existing literature. The subsequent study (Chapter 5) examines a multi-dimensional conceptualization of environmental sustainability, looking at its antecedents and their conflicting financial outcomes. The last study (Chapter 6) further examines a particular dimension of environmental sustainability under the lens of a sustainable business model anchored on the 3 Rs environmental strategy. Finally, the last chapter of the thesis describes each study's empirical and theoretical contributions, their implications, limitations, and directions for future research

2. Study Context

The following chapter aims to set the background around corporate environmental sustainability by presenting the issue of climate change and the international agreements that shaped the environment global corporations are operating. Following the role of the hospitality industry as an ecosystem and how the sector impacts and is being impacted by climate change is presented. Finally, strategies followed by leading companies in the industry are presented.

2.1 Climate Change

Climate change is defined as 'A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. This may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the atmosphere's composition or land use' (IPCC, 2018). On the other hand, the United Nations Framework Convention on Climate Change (UNFCCC) in Article 1 defines climate change as 'A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. The main difference in the two definitions lies in the distinction between climate change caused by human activities and climate variability attributed to natural causes.

The evidence for the anthropogenic nature of climate change became progressively more apparent in each of the IPCC Assessment reports in the last decades. A significant impact of climate change is the rise in world average temperature leading to global warming (Malekpoor *et al.*, 2017, 2019; Chalvatzis *et al.*, 2019). Emissions from greenhouse gases (GHGs), carbon dioxide (CO2), nitrous oxide (N2O) and methane (CH4) are primarily responsible for the phenomenon of global warming (Dessler, 2021). Activities affecting climate change include emissions of greenhouse gases and changes in land use (Zafirakis and Chalvatzis, 2014; Notton *et al.*, 2019; Tzanes *et al.*, 2019). The continents of North America and Asia, driven by China, has historically contributed the most to global cumulative emissions with a percentage of 29% each until 2017 (Figure 2.1). The latest IPCC report indicates that human activities are responsible for an increase of 1.1°C since 1850-1900 (pre-industrial era), expected to surpass

1.5 °C within the next 20 years (IPCC, 2021). The effects of climate change are already visible to every region on earth, and the changes will be more noticeable in the foreseeable future (Chalvatzis and Ioannidis, 2016; Ioannidis and Chalvatzis, 2017; Li, Chalvatzis and Pappas, 2017; Pappas *et al.*, 2018; Ioannidis *et al.*, 2019). The profound implications of climate change on humanity and its international nature made it a priority in the political agenda of world leaders. On the 21st of March 1994, the UNFCCC entered into force with 197 countries ratifying the Convection to prevent dangerous human interference with the climate system. Since then, the Kyoto Protocol and the Paris Agreement and more recently, the Glasgow Climate Pact have continued setting the tone of international climate change policy.

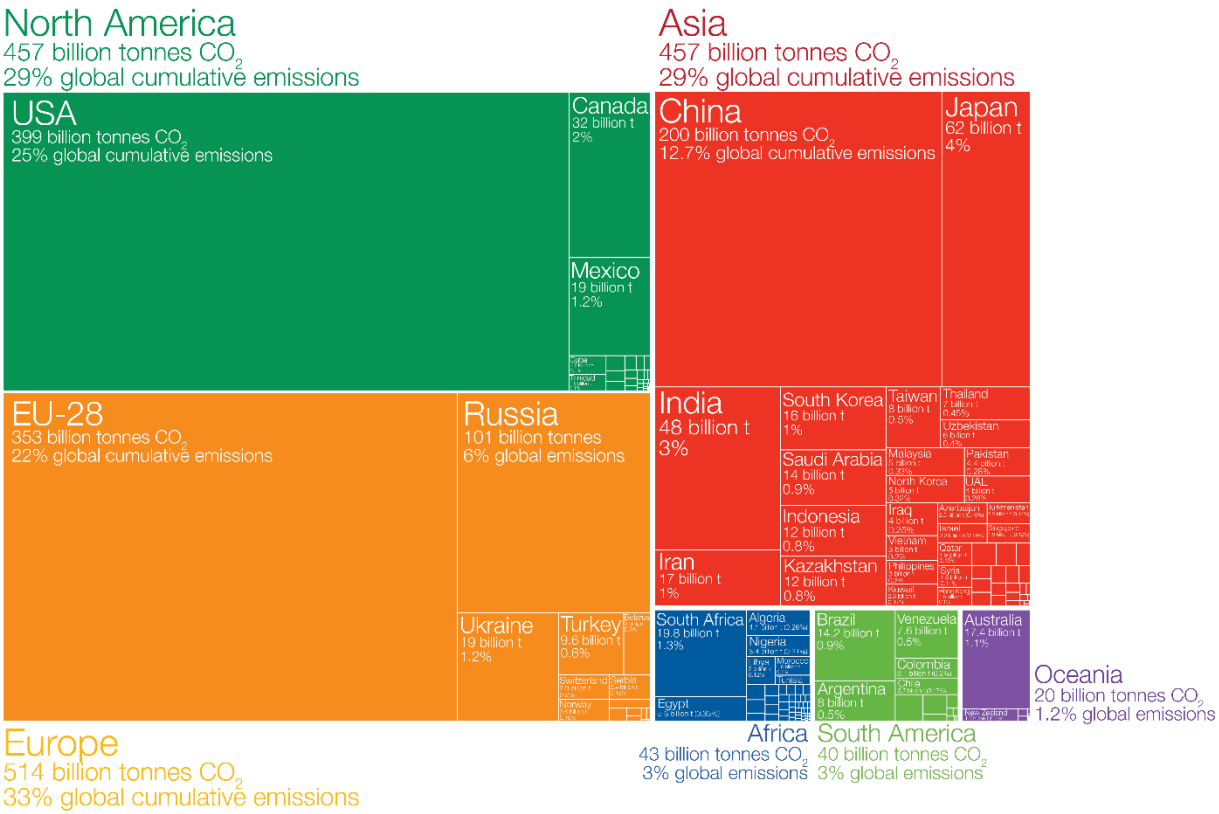

Figure 2.1: Global Cumulative CO2 Emissions Contributors Source: (Our World in Data, 2019)

2.2 Kyoto Protocol

The Kyoto Protocol was agreed in 1997 and is considered '*A breakthrough in global climate negotiations'* (Seo, 2017). The Kyoto Protocol extended the goals set out in UNFCCC, negotiated at the Earth Summit in Rio De Janeiro in 1992. Article 2 of the UNFCCC 1992 states that:

> *'the ultimate objective of this Convention […] is to achieve […] the stabilisation of greenhouse gas emissions in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate change.'*

Article 3 of the UNFCCC 1992 incorporates talking points between developed and developing countries and refers to 'common but differentiated' responsibilities in handling climate change. Among others, Article 3 maintains that:

> *'The Parties should protect the climate system for the benefit of present and future generations of humankind, based on equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.'*

In 1997 in Kyoto, the first climate treaty was accomplished, where the international community agreed the *'stabilisation of carbon dioxide emissions at 5% below the 1990 level'* (UNFCCC, 1998). The commitment, however, only binds developed countries. Major emission polluters, such as China, Indonesia and India, were not obliged to reduce their emissions(Pappas *et al.*, 2017; Li, Chalvatzis and Pappas, 2018). The US, the most polluting country at the time, did not become part of the agreement due to the absence of binding commitment by the developing countries.

From its early years of implementation, the Kyoto Protocol was found to have several setbacks. Researchers claimed that the 5% carbon dioxide limit below the 1990 level lacked rational support and benefited only some countries (MacCracken *et al.*, 1999; Nordhaus and Boyer, 1999; Victor, Nakićenović and Victor, 2001). In addition, the Kyoto Protocol did not foresee the leakage of emissions into non-signatories (Ellerman, Buchner and Carraro, 2007; Tietenberg, 2013), causing, therefore, carbon dioxide emissions to be increased in developing countries.

Nonetheless, although the Kyoto Protocol reduced the participating parties' emissions by 12.5%, well beyond the initial target, it failed to cut overall global emissions significantly. The reduction of carbon emissions came in parallel with a significant decline in energy consumption of the Kyoto Protocol parties. This is mainly attributed to the collapse of the

Soviet Union, which caused a rapid decline in heavy manufacturing industries, especially at the two higher energy consumers of the group, Russia and Ukraine. Excluding those parties brings the reduction of emissions of the involved parties down to 2.7%, which can be considered a failure to reach the initial goal of 5% (Circular Ecology, 2015). However, the Protocol achieved to put the issue of climate change on the international policy agenda while it laid the groundwork for setting specific targets through national measures.

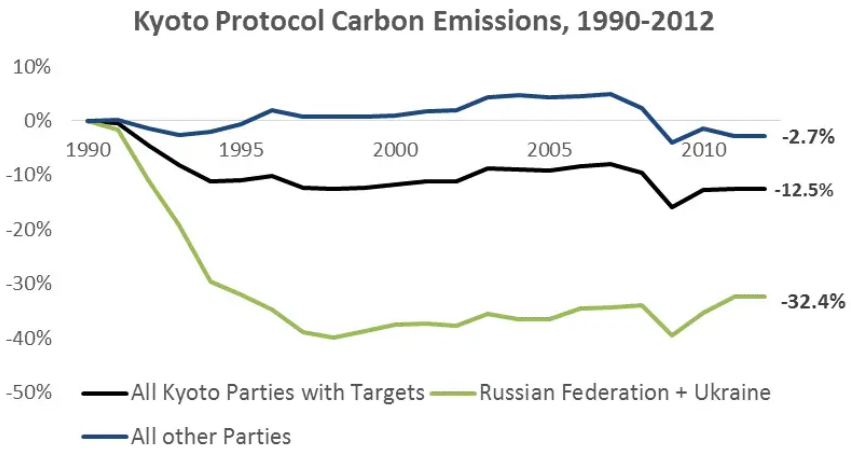

Figure 2.2: Emissions trajectory of Kyoto parties Source (Circular Ecology, 2015)

Moreover, the most important innovation of the Kyoto Protocol was its flexible (or market-based) mechanisms. The introduction of these mechanisms has high significance for corporations since it was the first time in international climate change policy where they could actively participate and invest in emissions reductions. The best known of them is the Emissions Trade Scheme (ETS), with its most used application is the EU ETS, which allows eligible organisations to trade their emission allowances if they have managed to reduce their emissions or purchase allowances if they have failed to reduce them. It is notable that although initially the EU-ETS has been accused of its low carbon price, which was not seen as capable of triggering investment in decarbonisation, through various iterations of its targets, it has recently exceeded €50/CO2 ton (Sheppard and Hodgson, 2021) making it a noticeable burden for carbon-intensive emissions.

Kyoto's flexible mechanisms have seen tremendous success, especially from the private sector, continuing until today. The flexibility of those mechanisms enables firms to reduce their carbon footprint by interacting with external actors. The Protocol received significant attention from Multinational corporations (MNCs) due to their interaction with institutions from developed and developing countries. Their extensive experience operating in foreign countries provided them with the knowledge required to acquire emission credits outside their home country (Pinkse, 2007). The mechanisms triggered an initial trend for firms, especially large MNEs, to be more forthcoming in making detailed disclosures of their carbon footprint and their actions to reduce it. However, this was merely focused on firms operating in a limited number of industries, mainly those considered as heavy polluters (Freedman and Jaggi, 2005; Brooks and Oikonomou, 2018).

2.3 Paris Agreement

Paris Agreement emerged from the 21st Conference of the Parties (COP) in 2015, and 191 out of 197 Parties to the UNFCCC are Parties to the Paris Agreement. Thus, the agreement constitutes an essential tool for combating climate change and intensifying decarbonisation investment.

Article 2 encompasses the goals of the agreement:

> *'(a) Holding the increase in the global average temperature to well below 2°C above pre-Industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change;*
>
> *(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production; and*
>
> *(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.'*

In Paris, states were asked to submit their national plans to reduce GHGs voluntarily and achieve a goal in their five-year plan, again voluntarily. Part of the national strategic plans is the developed countries' obligation to assist the developing countries, as provided in Articles 3 and 9 of the Agreement. Article 3 maintains that '*as nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious effort',* and Article 9 states that '*developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention'.*

However, even though the countries submitted their plans to COP21, the agreement lacks a provision of a quantitative amount of agreed emission reductions, making it a comparatively weak mechanism. As it has been rightly observed, since the targets are nationally set, creating a bottom-up effect, the total reduction at the global level is arbitrarily set (Seo, 2017). The Paris Agreement also provides for its Parties' self-monitoring and accounting, meaning that no independent international body can examine and assess individual nations' efforts concerning their nationally intended plans.

Another aspect of the Paris Agreement that could be regarded as problematic is its lack of legal enforceability. The agreement cannot have legal implications because of its voluntary nature and the "intended" carbon emission reductions by the signatory Parties. Nonetheless, the agreement incorporates a "name and shame" strategy.

Nonetheless, agreements without formal enforcement may attract wider membership and prove more sustainable than agreements with harsh penalties. The Paris Agreement achieved nearly universal participation because the fundamental obligations were flexible and unenforceable, at least by traditional legal means. "Naming and shaming" could also trigger international pressure to comply by imposing material and social costs, while shaming could make it harder to attract international partners and indirectly lead to economic sanctions. Importantly, research has shown that states value their status in the international community (Renshon, 2017).

The pressure towards institutions for climate change action is even more evident during the last decade and the post-Paris agreement era. This is mainly due to the way individuals participate in social movements, as they have been shaped through the development of social media platforms (Tye *et al.*, 2018). Individuals can show their opposition to politicians, corporations,

and institutions through social media with a low-cost effort and have their voices heard by a wider public. A recent movement with significant influence on climate change that is high on the global political agenda is 'Fridays for Future', which Greta Thunberg initiated. The movement is a youth-led and organised movement supported by more than 14 million people from 7500 different cities (Fridays for Future, 2021). The public discourse about climate change has been greatly impacted by the youth, a group of the society neglected altogether in decision making, even though they will have to live with the future consequences of environmental deterioration. Young activists are impactful with policy makers, politicians and corporations (Hess, 2010).

2.4 Sustainable Development Goals and Net Zero as drivers of corporate sustainability

The voluntary nature of international agreements and the difficulties of setting international corporate environmental goals impose fundamental challenges in creating an integrated theoretical or managerial framework that will guide corporations to measure and manage their impacts on sustainability (Starik and Kanashiro, 2013). The Sustainable Development Goals (SDGs) are a global agenda that defines the world's most pertinent sustainability challenges until 2030. The UN member states agreed on these goals in 2015. They consist of 17 aspirational sustainability goals and are broken down into 169 interconnected actionable targets used as an integrated reference for impact-oriented corporate sustainability.

Organisations worldwide hold a significant role in advancing the Sustainable Development Agenda by aligning their strategies and operations with the SDGs, providing solutions to global sustainable development challenges while creating new opportunities for them (Rosati and Faria, 2019). The United Nations' SDGs can be used in a business context as a universally applicable framework that may guide companies in better measuring and managing their impacts on sustainability in light of this expanded understanding of corporate sustainability. Corporations adhering to SDGs can reach new customer segments, build partnerships for achieving goals, and innovate by developing new sustainable business models (Morioka *et al.*, 2017). Nowadays, the vast majority of public companies are reporting on how their organisation addresses SDGs (Initiative and Compact, 2017; Compact, 2018). Sustainability reporting is considered an enabler of SDGs action, investment and strategy through a transparent unified approach as acknowledged by the two leading global institutions on

sustainability reporting, i.e. the United Nations Global Compact (UNGC) and the Global Reporting Initiative (GRI).

In the same line with SDGs, the concept of 'Net zero emissions' became a crucial part of companies' environmental sustainability strategy following its establishment post the Paris Agreement. The final text of the agreement formulated the scientific concept to an established referral point of climate change policy 'To achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century." The concept benefited from its applicability to organisations of all scales and sectors and gave context on holding the global temperature rise to 1.5C. To date, November 2021, 135 countries have achieved, passed a law, or they are in talks for a net-zero plan, covering 88% of global emissions (Energy & Climate Intelligence Unit, 2021). The transition to net-zero emissions requires significant investment from both the public and the private sectors(Zafirakis *et al.*, 2014; Li, Chalvatzis and Stephanides, 2018; Li *et al.*, 2019; Stephanides, K. Chalvatzis, *et al.*, 2019; Stephanides, K. J. Chalvatzis, Li, Lettice, *et al.*, 2019; Stephanides, K. J. Chalvatzis, Li, Mantzaris, *et al.*, 2019; Kallis *et al.*, 2021). The European Union in January 2020 released its European Green Deal, an ambitious investment plan of 1 trillion euro investments aiming to make Europe the first climate-neutral continent by 2050. In October 2021, the United Kingdom followed with its net-zero strategy for decarbonising all sectors of the UK economy to meet its net-zero target by 2050. Similar financial plans are adopted by South Korea, committed to a 61 billion USD Green New Deal to achieve carbon neutrality by 2050.

Similarly, China committed to a carbon-neutral economy by 2060, India by 2070, the United States and Australia by 2050, with their investment plans to achieve the transition being debated. At the same time, commitments to net-zero have also been made at the industry and firm levels. Notably, 32% of the largest publicly listed 2000 companies are committed to a net-zero goal in a certain timeframe, usually by 2050 or earlier.

2.5 Tourism and Hospitality Industry as an ecosystem

The issue of climate change has emerged as of imperative importance to the tourism and hospitality industry both on how climate change disrupts the industry and how tourism and hospitality firms can anticipate those effects. There is a two-way relationship between the tourism and hospitality industry and climate change. On the one hand, the hospitality industry

contributes to climate change. On the other hand, climate change has an impact on hospitality markets.

IPCC's latest report projects with high confidence that 'Every region in the world will experience concurrent changes in multiple physical climate system conditions (CIDs) challenging the resilience and adaptation capacity of the region' (Masson-Delmotte *et al.*, 2021). Further details of regional effects of climate change can be found in Table 2.1.

Table 2.1: *Summarise the regional effects of climate change as indicated in (IPCC, 2021) report.*

Region		Effect
Europe		1) Temperatures will rise in all European areas 2) The frequency and intensity of hot extremes have increased in recent decades and are projected to keep increasing 3) Critical thresholds relevant for ecosystems and humans are projected to be exceeded for global warming of 2°C and higher 4) Positive trend in shortwave radiation
		1) Extreme precipitation and pluvial flooding are projected to increase at global warming levels exceeding 1.5°C in all regions except the Mediterranean
		1) Strong declines in glaciers, permafrost, snow cover extent, and snow seasonal duration at high latitudes/altitudes are observed and will continue in a warming world
		1) Relative sea level will rise in all European areas except the Baltic Sea, at a rate close to or exceeding global mean sea level. Changes are projected to continue beyond 2100. 2) Extreme sea level events will become more frequent and more intense, leading to more coastal flooding. 3) Shorelines along sandy coasts will retreat throughout the 21st century
Asia		1) The observed mean surface temperature increase has clearly emerged out of the range of internal variability

		2) compared to 1850-1900. Heat extremes have increased while cold extremes have decreased, and these trends will continue over the coming decades. 3) Marine heatwaves will continue to increase
		1) Average and heavy precipitation will increase over much of Asia.
		1) Glaciers are declining, and permafrost is thawing. Seasonal snow duration, glacial mass, and permafrost area will decline further by the mid-21st century
		1) Relative sea-level around Asia has increased faster than the global average, with coastal area loss and shoreline retreat. Regional-mean sea level will continue to rise
Africa		1) Mean temperatures and hot extremes have emerged above natural variability, relative to 1850–1900, in all land regions in Africa 2) The rate of surface temperature increase has generally been more rapid in Africa than the global average, with human-induced climate change being the dominant driver 3) Observed increases in hot extremes (including heatwaves) and decreases in cold extremes (including cold waves) are projected to continue throughout the 21st century, with additional global warming 4) Marine heatwaves have become more frequent since the 20th century and are projected to increase around
		1) The frequency and intensity of heavy precipitation events are projected to increase almost everywhere in Africa, with additional global warming
		1) Mean surface wind speeds have decreased
		1) Relative sea level has increased at a higher rate than global mean sea level around Africa over the last 3 decades. Relative sea-level rise is likely to virtually certain to continue around Africa, contributing to increases in the frequency and severity of coastal flooding in low-lying areas to coastal erosion and along most sandy coasts
Australasia		1) Australian land areas have warmed by around 1.4°C and New Zealand land areas by around 1.1°C between ~1910 and 2020, and annual temperature changes have emerged above natural variability in all land regions. 2) Heat extremes have increased, cold extremes have decreased, and these trends are projected to continue.

		3) An increase in marine heatwaves and ocean acidity is observed and projected 4) Enhanced warming in the East Australian Current region of the Tasman Sea is observed and projected
		1) Snow cover and depth have decreased and are projected to decrease further
		2) Relative sea level rose at a rate higher than the global average in recent decades; sandy shorelines have retreated in many locations; relative sea-level rise is projected to continue in the 21st century and beyond, contributing to increased coastal flooding and shoreline retreat along sandy coasts throughout Australasia
		3) The intensity, frequency and duration of fire weather events are projected to increase throughout Australia
Central and South America		1) Mean temperatures have very likely increased in all sub-regions and will continue to increase at rates greater than the global average 2) Marine heatwaves are also projected to increase around the region over the 21st century
		1) Mean precipitation is projected to change, with increases in North-West South America (NWS) and South-East South America (SES)
		1) Snow cover and depth have decreased and are projected to decrease further
		1) Relative sea-level rise is extremely likely to continue in the oceans around Central and South America, contributing to increased coastal flooding in low-lying areas and shoreline retreat along most sandy coasts.
North and Central America		1) Temperate change (mean and extremes) in observations in most regions is larger than the global mean and is attributed to human influence. Under all future scenarios and global warming levels, temperatures and extreme high temperatures are expected to continue to increase (virtually certain) with larger warming in northern subregions 2) Marine heatwaves (intensity and duration) are projected to increase
		1) Strong declines in glaciers, permafrost, snow cover are observed and will continue in a warming world, with the exception of snow in the northern Arctic
		1) Relative sea-level rise is projected to increase along most coasts and is associated with increased coastal flooding and erosion (also in

		observations). Exceptions include regions with strong coastal land uplift along the south coast of Alaska and Hudson Bay.

*Only events with higher confidence levels reported

** The table is designed by the author with data from (IPCC, 2021)

Extreme weather conditions, temperature rises, marine heatwaves, or river flooding increase tourist destinations' survival risk. Extreme weather conditions can interfere directly with the operations of hospitality firms by causing closure, reputation damage and increasing the cost of operation while reducing the number of customers visiting specific destinations. In addition, the firms' premises are more prone to infrastructure damage and business interruption issues in case of extreme weather conditions (Becken, 2010; Jones and Wynn, 2019; Mendoza-Tinoco *et al.*, 2020). Recent examples of direct implications of climate change are indicated in winter tourism and particular ski resorts due to unexpected rise in temperature (Spandre *et al.*, 2019) or the significant decrease in bookings and arrivals after Cape Town's "Day Zero" water crisis in 2018 (Robins, 2019). Beyond the direct impacts of climate change on the hospitality industry, certain indirect consequences merit attention.

The introduction of local and national environmental policies and penalties being introduced in cities and countries are adding additional costs to the company's operations. Hospitality firms are also facing high utility bills in countries liable to carbon emission taxes. Although firms operating in the industry, such as restaurants, leisure centres, and hotels, face similar challenges, their exposure varies. Hotels and leisure centres are particularly affected by changing transport trends and policies aiming to reduce emissions in the transportation sector. That could significantly increase the cost of travelling, thus reducing the number of visitors to specific destinations. On the other hand, restaurants are significantly affected by disruptions in their food supply chain. For example, winemakers are experiencing significantly lower production levels due to adverse weather effects caused by climate change. Similarly, warming waters threatens fish stocks in certain areas and create opportunities in others through fish migrations. The need for the world to reduce emissions also directly affects the industry of agriculture, a significant contributor to worldwide emissions. The hospitality industry is at the forefront of the consequences of climate change, and firms operating within it need to adopt sustainable business models for their existence.

Concurrently, the hospitality industry has historically had a dramatic environmental impact through the volume of consumable goods it uses. A recent hospitality industry outlook (Select USA, 2019) indicates the growing and developing prospects of the sector, anticipating a pace of development that is much faster than the average economic development (Su and Chen, 2020). Given the challenges the industry faces from climate change and the transition towards a greener economy, corporate sustainability towards the environment is of imperative importance. The United Nations World Tourism Organization (UNWTO) has been promoting the sustainable development of the sector through the active involvement of all relevant stakeholders. It also requires corporations operating in the industry to conform to the norms for climate action to cut global tourism emissions by half until 2030 and reach a net-zero emission target as soon as possible before 2050. In particular, the 'Glasgow Declaration on Climate Action in Tourism' proposes actions under the labels of "measure, decarbonise, regenerate, collaborate and finance" pathways (UNWTO, 2021). In that manner, industry leaders have committed to managing their corporations responsibly and adopted environmentally friendly strategies.

Leading hotel groups like InterContinental, Hilton, Starwood, and Hyatt have made significant environmental pledges to reflect their commitment to a sustainable future. For example, Intercontinental corporation, a global leader in the hospitality industry owing 6031 hotels (IHS, 2021), is committed to reducing its energy use and carbon emissions, contributing towards the United Nations SDGs. The firm aims to follow an environmental strategy to achieve a 15% absolute reduction on its direct operations and a 46% per m^2 reduction in franchise operations by 2030. At the same time, the company is targeting 100% new-build hotels to operate at very low/ zero carbon emissions standards and maximise the use of renewable energy. Furthermore, in terms of minimising or managing its waste, the firm is committed to eliminating single-use items or moving to reusable or recyclable alternatives across the guest stay, minimise its food going to waste through a "prevent, donate, divert" plan and form partnerships to achieve circular solutions for major commodity items. Finally, the hotel chain aims to deliver water stewardship while ensuring adequate water, sanitation, and hygiene conditions. In the same manner, Hilton pledged to reduce its carbon intensity by 61% and committed to specific targets in terms of its water stewardship and waste, aiming to achieve a 50% reduction until 2030. Furthermore, the company recognises its impact on its supply chain and commits to improving its procurement strategy while partnering with its suppliers to improve their environmental practices.

The global leisure industry leader, Walt Disney Company, committed to carbon neutrality by 2030 by following a strategy of reducing emissions through investments at efficient technologies, reducing its energy consumption and replacing existing carbon-intensive energy sources with lower-emission alternatives. The company plans to offset the remaining emissions through carbon credit projects. The company's strategy statement on water stewardship relies on water conservation and investment to conserve and protect local water resources. Moving a step forward, Disney is committed to reducing its emissions beyond its direct operations, known as Scope 3 emissions in the Paris Agreement. Furthermore, the company aims to achieve zero waste on its premises by 2030 (Walt Disney, 2021), McDonald's, one of the largest restaurant franchises globally, recognise five impact areas for tackling climate change, referring to climate action, packaging and waste, sustainable agriculture and beef, conserving forests, and water stewardship. The company aims to reach net-zero by 2050, covering all three scopes of the Paris Agreement with a commitment to reduce GHG emissions related to its restaurants and offices by 36% by 2030. In addition, the restaurant chain aims to source 100% of its packaging from renewable, recycled, or certified sources and recycle 100% of its packaging at the company's restaurants by 2025. In terms of its water management, the firm claims to conserve water and use it responsibly and efficiently through seeking expertise partnerships such as the World Wildlife Fund (WWF) and World Resources Institute to identify risks and create a stewardship approach.

3. Research Methods

This Chapter will focus merely on the methodological instruments used in this thesis. It starts with an outline of the research approach followed in this thesis and the reasoning behind those choices. Subsequent, the methodology used to select the articles in the Systematic Review study and the data protocol developed to extract the data from the studies is described. Finally, the Chapter presents the methodology followed for the two empirical studies. That refers to the sampling and data collection methods before proceeding to the operationalisation of each study's variables.

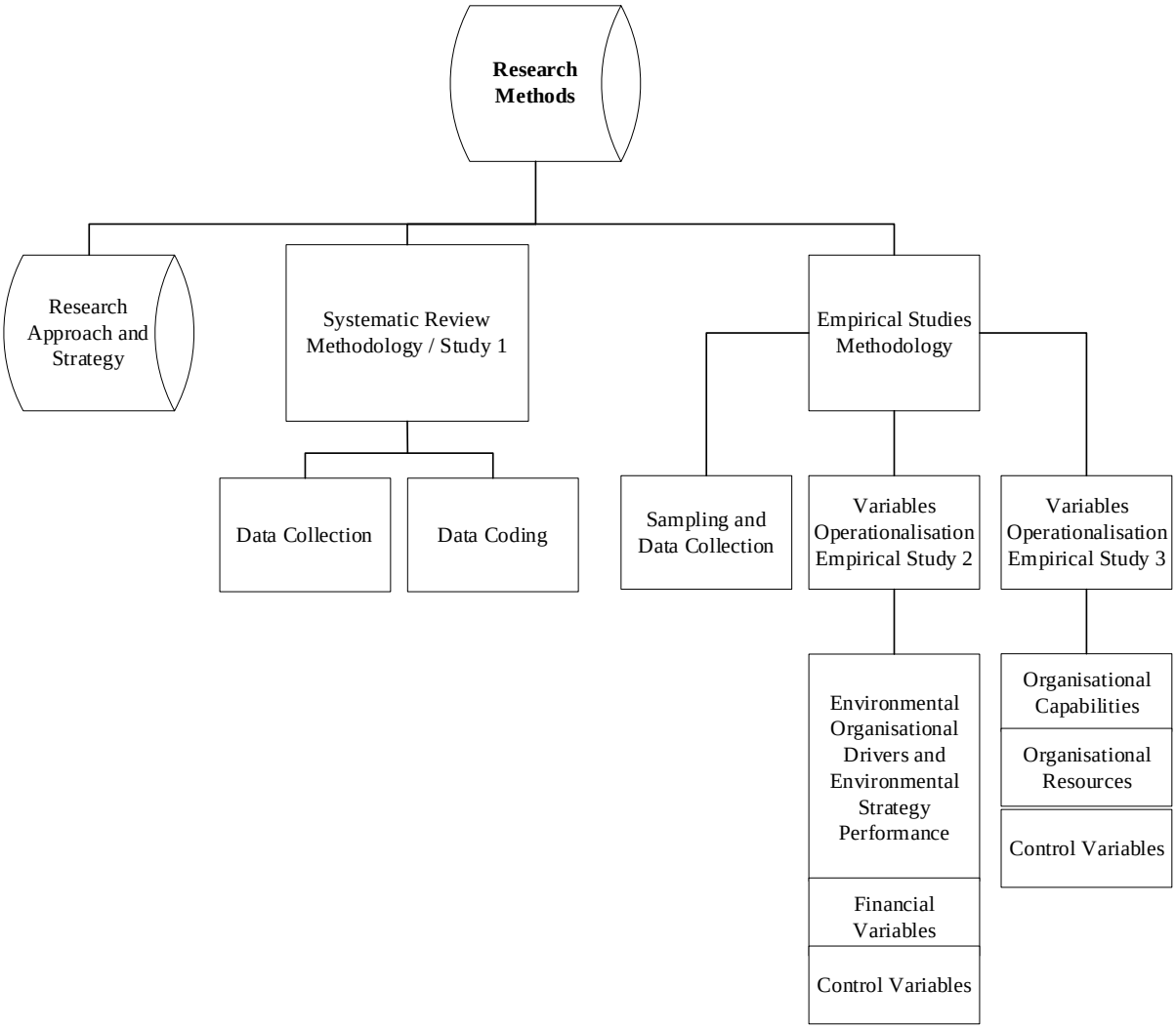

Figure 3.1: Chapter 3 ‘Research Methods’ Outline

3.1 Research Approach and Strategy

This thesis takes a quantitative methodological choice to explore the antecedents and outcomes of corporate environmental strategies using multinational firms as the unit of analysis. It is an appropriate method as it ensures the quantity of data and ‘embodies a view of social reality’ from external and objective sources’ (Bryman, 2016). The thesis first uses a quantitative design systematic review that includes studies with numerical data followed by two empirical studies with highly structured methodology and quantifiable observations (secondary online data) that

capture the quantitative and numeric descriptions of trends and attitudes toward various variables.

The particular thesis follows a deductive theory approach in all three studies. A deductive approach starts with existing general theories and narrows down to make specific assumptions (Bell et al., 2018). The research question, the keywords and the research strategy are pre-defined in the Systematic Review study. Similarly, the empirical studies of this thesis have specific research questions and aim to test certain hypotheses deduced from existing theories, which strictly follow a deductive approach. One of the objectives of this thesis is to test and evaluate hypotheses related to existing theories (Saunders et al., 2016). Data are collected and analysed in this study to test certain assumptions. The analysis results are used to revise the theories in the relevant field. The deductive approach is reasonably consistent with the epistemology position and methodology choice (Saunders et al., 2016).

3.2 Systematic Review Methodology/ Study 1

The purpose of a literature review is to provide the background and justification of the research undertaken. Authors can extract or synthesise issues, as well as findings and methods from previous research to build a coherent argument that will lead to the description of the undertaken study. Traditional or narrative literature reviews aim to analyse and summarise a body of literature by presenting a comprehensive background of the literature within the topic of concern, highlighting new research streams, identifying gaps, or recognising inconsistencies. This type of literature review can help refine, focus, and shape research questions and develop theoretical and conceptual frameworks (Coughlan et al., 2007). However, they are characterised by a lack of methodological transparency and failure of replication capacity (Popay *et al.*, 2006). Hart (1998) pinpoints the lack of quality and the dedication of existing research to subjectively summarise the extant literature as major limitations of existing literature reviews at that time. The systematic literature review, in contrast, undertakes a more rigorous approach to reviewing the literature, perhaps because this type of review is used to answer highly structured and specific research questions. In social sciences literature, three main types of review techniques are identified, namely 1) Bibliometric, 2) Meta-analytic, 3) Systematic/Integrative. A bibliographic review relies on citations to identify a trend of a research theme. A meta-analysis uses a quantitative approach to assess prior empirical research findings on a specific research question. It allows researchers

to identify overall directions based on the effect sizes of previous empirical research. Finally, a systematic review provides a critical discussion on a research topic by integrating extant literature, summarising research findings, identifying research gaps, assessing the effectiveness of the theoretical instruments used to explain particular research topics, and providing fruitful future directions on the examined topic.

For this study's purpose, a systematic review technique is pursued given the knowledge gaps in the existing reviews on international management and marketing corporate sustainability literature. The particular methodological selection was made purposely due to its rigorous nature, the transparency of the methodology and the replicability of the review. Based on the aforementioned and grounded on the narrative approach to develop a coding scheme, summarize previous findings, conceptualize existent topics and develop theoretical frameworks based on the dominant theoretical underpinnings. In conducting the content review analysis, a four-stage process is adopted: data collection, coding, analysis and interpretation of coded content following (Gaur and Kumar, 2018; Aguilera *et al.*, 2019) to systematically access the existent literature. The two first steps will be described in this section, while analysis and interpretation will be discussed in Sections 4-3 and 4-4 of the review.

3.2.1 Data Collection

As a means to identify the initial pool of articles, the concept-driven systematic review method was adopted following a three-step approach, as suggested by Webster and Watson (2002). Firstly, in accumulating a complete census of relevant literature and build the initial pool of studies, articles with relevant topics were searched in various electronic databases, such as Ebsco, Scopus and Science Direct, which provide comprehensive coverage with full access. The following keywords have been used to identify relevant articles: environmental marketing; environmental strategy; green marketing; environmentally friendly; sustainable marketing; natural environment; environmental orientation; environmental proactivity; environmental awareness; and environmental management in conjunction with international-related keywords, namely multinational firms; global corporations; global consumers; international marketing; cross-cultural marketing; and cross-national marketing. These keywords were identified from previous reviews on the subject (Aykol and Leonidou, 2015) and were refined by two established scholars in the field. These pre-defined keywords were searched in article title, author-supplied keywords, and author-supplied abstract. The search was limited to articles

published in English in academic peer-reviewed journals since the inception of this research field in the early 1960s.

An important element of a reliable systematic review is the quality appraisal of the articles involved. Several studies (Podsakoff *et al.*, 2005; Jones, Coviello and Tang, 2011; Bouncken *et al.*, 2015) encourage authors to conduct their search via online databases including only peer-reviewed articles to create a transparent, replicable process. The quality of the selected articles can be further insured using major academic journal rankings by the application of a quality threshold (Kraus, Breier and Dasí-Rodríguez, 2020). Based on the aforementioned the initial search contained articles published in an academic journal rather than a book, book chapters or conference proceedings. That yielded to 949 articles, of which 498 had to be removed as they were identified as duplications. In addition, the review analysis was limited on articles sourced from journals included in the Chartered Association of Business Schools (2018) academic journal guide with the aim of maintaining a high-quality level review following (Paul, Parthasarathy and Gupta, 2017) suggestion.

An additional 167 articles were found to be irrelevant after carefully screening the title and the abstract. I critically appraised the full text of the remaining 284 potentially relevant articles by considering the following three criteria: (1) To focus on environmental marketing/management strategies as an independent concept, rather than as a sub-dimension Corporate Social Responsibility. Thus, articles examining environmental strategies as part of the overall CSR and not as an independent concept were excluded; (2) To be of an international nature, by examining the sustainability strategies of firms (e.g., exporters, MNEs, etcetera.) when crossing their national boundaries; (3) To have empirical nature, with papers having a conceptual, methodological, review, or meta-analytical nature being excluded. Only 68 articles met these pre-defined selection criteria, which were subsequently examined by two academic experts to verify their appropriateness. The outcome of this process was to exclude another seven articles, leading to a sample of 61 articles.

After stocking an initial pool of articles, the review continued through the 4* International Business, Management, and Marketing Journals acknowledged as the leading journals in business research and manually searched for potentially missed articles, leading to 4 more articles. Finally, the reference lists of the 65 articles that passed the cross-check were reviewed,

revealing a further 53 articles fulfilling the eligibility criteria set; thus, bringing the final sample of articles useful for the review to 118.

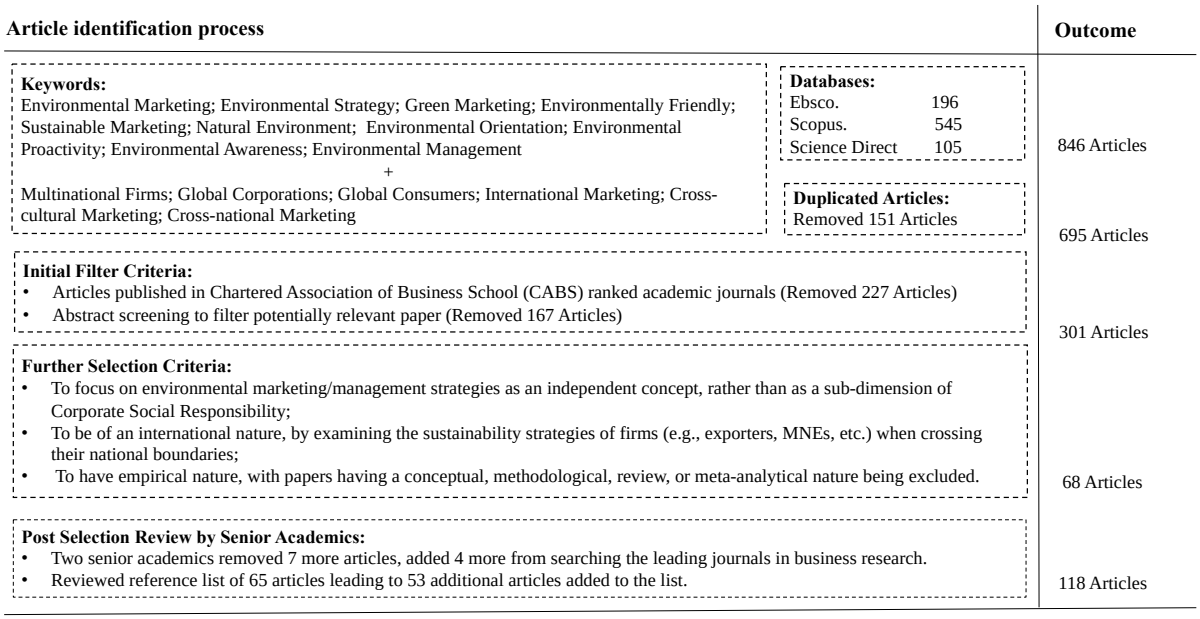

Figure 3.2: Article identification process

3.2.2 Data Coding

According to Callahan (2014), a solid literature review must follow the five Cs referring to concise, clear, critical, convincing and contributing. Intending to fulfil those objectives and map research on the antecedents and outcomes of environmentally sustainable strategies within an international setting, I proceeded with a manual content analysis of the selected articles, developing a robust coding scheme. After running a pilot test of the first twenty studies and re-evaluating the review protocol for final changes, the coding scheme was finalised upon consultation with the supervision team.

Since the research topic is a narrow scope review examining a research theme rather than a research method (Gaur and Kumar, 2018), a hybrid approach was used in developing the coding scheme. This included extending the coding schemes developed in previous, with a similar focus, literature (Aykol, Palihawadana and Leonidou, 2013; Aykol and Leonidou, 2015) and following Gaur and Kumar (2018) and Weber (1990) directions on compiling a coding scheme. As a result, to better reflect the needs of the study, I eliminate and incorporate parent categories, establishing the six mainstream categorizations, each consisting of several parent categories and sub-categories (Table 3.1) as described below.

The first broad category includes the article's bibliographic information, used for identification and clustering purposes. That included nine parent categories varying from the authors' names to the journal field. The second category refers to the research scope incorporating details for the parent categories of – *focus region, host countries involved, number of industries covered, economic sector classification, unit of analysis* and *firm activity type.* The third broad category incorporates methodological aspects of the study. That contained thirteen parent categories: the article's nature, time dimension, sample size, data collection, data source, key informant, response rate, type of statistical analysis and statistical tests performed in the article such as reliability *response-bias, endogeneity, validity and robustness tests.* The fourth broad categorization incorporates the parent categories of 1) the *number of paradigms and main theories* used in conjunction with 2) the studies' findings to draw fruitful insights from the theoretical assessment of the review (Section 4.3). The fifth category referred to the reviewed articles' research thematology, where all the *independent, dependent, moderators and interaction terms* used in the articles were identified. These were placed under eight sub-categories and multiple derivatives that will be described in detail in Section 4.4. Finally, the last category referred to the future directions and implications of the studies intended to discuss the future trends in the literature based on the articles of the last five years.

Table 3.1: Data Coding Frame

Parent Category	**Sub-categories**
1. Bibliographic Information	
Authors	Authors Names
Title	Title of the Article
Year	Year of Publication
Email	Authors Emails
Journal	Journal Name
Journal Field	As described in the official CABS 2018 List
Publisher	SCIMAGO ORGANIZATION
Journal Country of Origin	Country the Journal is identified
ABS Rank	Ranged from 1 to 4*
2. Scope of Research	
Focus region	*North America=1, Europe=2, Asia=3, Africa=4, Australia=5, Latin America=6, Global=7*
Host Countries involved	*1=1, 2=2, 3=3, 4=Four or more, 0=Not specified*

Number of Industries Covered	*One=1, Two=2, Three=3, Four or more=4, Not specified=0*
Economic Sector Classification	*1=Primary Sector, 2= Secondary Sector, 3= Service Sector, 4= Not Specified*
Unit of Analysis	*Firm=1, Consumer=2, Website/report/ads=3, Other=4*
Firm Type	*1=Multinationals, 2=Domestic, 3=Exporting*
3. Study Methodological Aspects	
Nature of the Article	*1 = Quantitative, 2= Qualitative, 3= Mixed*
Time Dimension	*Cross-sectional=1, Longitudinal=2*
Sample size	*sample size*
Data collection	*Primary=1 (paper pencil survey=1a, electronic survey=1b, observation/experiment=1c), Secondary=2 (specify)*
Data Source	1=Survey,2=Interview,3a=Sustainability reports, 3b=Reuters Eikon,3c=KLD,3d=websites/advertisements,3e=other government databases,3f=Other commercial databases
Key informant	*CEO/Owners=1, General Managers=2, Marketing Managers=3, Environmental Managers =4, Employees=5, Consumers=6,, Not applicable=0 Not Specified=7*
Response rate	*19% or less=1, 20-29%=2, 30-39%=3, 40% or more=4, Not specified=0, Not applicable=9*
Statistical Analysis	*Regression=1, Content Analysis=2, SEM=3, Miscellaneous =0*
Reliability	*Cronbach or Compose reliability*
Robustness	*Yes/No*
Response Bias	*Yes/No*
Endogeneity	*Yes/No*
Validity	*Yes/No*
4. Research thematology	
Independent variables	*All IVs in the model*
Dependent variables	*All DV(s) in the model*
Moderators/Interaction terms	*Moderators and interactions*
Control variables	*Controls*
Thematic areas	*After data extraction*
Environmental marketing/strategy variables	*Variable name*
5. Theoretical Assessment and findings	

Theory	Theories Used
Findings	*Text*
6. Future directions	
Future research direction	*Text with bullet points for the paper published between 2014 and 2019*

The coding process was primarily carried out by myself under two senior academics' (the supervision team) close supervision, with subject knowledge and experience in content analysis. Building on the coding framework, a coding manual that incorporates operational detailed definitions and categories of each item were developed. Moreover, to ensure coding reliability Cohen's Kappa coefficient (Neuendorf, 2016) was used in the complete sample of articles with a result of 89 percent, which is above the recommended threshold of 80 percent (Gaur and Kumar, 2018; Aguilera *et al.*, 2019).

3.3 Empirical Studies Methodology

Research on sustainability issues has used a plethora of secondary data sources depending on the phenomenon examined. Data on the macro-economic level are easier to access from a wide range of publicly available databases. Namely, the major databases on country-level data are 1) OECD Environment Data 2) Our World in Data 3) European Environment Agency 4) Eurostat 5) International Energy Agency 6) UnStats. On the other hand, corporate-level sustainability performance data are available either through firm self-reporting sustainability reports or commercial sustainability rating providers. Some of the most important ESG rating providers are 'Ethical Investment Research Service (EIRIS), Kinder Lydenberg Domini and Co. (KLD), Bloomberg Sustainability and 'Refinitiv'.

For the purpose of this thesis, the options explored were KLD and Thomson Reuters Refinitiv due to institution access restrictions. However, the option of KLD was neglected due to incomplete data not allowing any statistical analysis to be performed. Equally, I found difficulties matching the available environmental data of firms with their particular financial data at Compustat (the corresponding database for financial data at WRDS databases platform).

As a result, the two empirical studies were based on secondary objective data collected by the Thomson Reuters Eikon database recently renamed as 'Refinitiv'. According to the database, research analysts are trained to collect ESG data. The database uses local language expertise and operates from different locations across the globe, processing numerous publicly available

information sources to provide up-to-date, objective, and comprehensive coverage. Analysts process manually for each company within the ESG universe, with each measure undergoing a careful process to standardise the information and guarantee it is comparable across the entire range of companies.

The data are sourced from 1) Annual reports, 2) Company websites, 3) NGO websites, 4) Stock exchange findings, 5) CSR reports 6) News sources. The database is updated daily where new firms are incorporated accordingly. The quality of the data is ensured using a four-stage procedure combining both algorithmic and human processes. The stages refer to 1) Data entry/ pre-product 2) Post-production 3) Independent Audits 4) Management Reviews.

For the purpose of this thesis, to ensure further reliability, data for each company are collected at their Bayesian model since criticism questions the interpretation of the rating methodologies given by different ESG data-independent agencies (Rafat and Salama, 2016). The focus was on global chain outlets providing data within the last three year period and belonging to the following industry GICS industry classifications: Consumer Services / Consumer Discretionary / Consumer Services / Hotels Restaurants and Leisure. This led to 4 GICS sub-industries, namely: (a) Hotels, resorts and cruise lines, (b) Restaurants, (c) Casinos and gaming, and (d) Leisure facilities. The studies used cross-sectional data with reference years for environmental data and financial performance data the 2016 and 2017 correspondingly allowing a time lag of 2 years since environmental-related data are available at the beginning of the year and financial data are calculated periodically at the end of the year.

Firms were excluded from each study if they were not engaged in any of the activities examined from the proposed conceptual frameworks. The different times the data were extracted for each study and the different environmental constructs examined on each conceptual framework led to different sample sizes. Since the research questions of each empirical study are distinctly different, the use of samples from the same dataset does not impose any challenges. Additionally, the research did not account for companies with activities expanding in the aviation industry as their environmental footprint and business nature are substantively different.

3.3.1 Sampling and Data Collection

Study 2 (Chapter 5) initial sample consists of 173 companies, which were filtered for their main activity in the hospitality sector as a restaurant, hotel business offering accommodation, or leisure companies. The final sample consisted of 116 companies representing a large proportion of the global hospitality industry. These were broken down as follows: Hotels and Cruise lines (35); restaurants (53) Leisure & Casinos (28). The corresponding % can be found in Figure 3.3. A large proportion of the sample consists of companies having headquarters in North America. Those account for 51.7 % of the sample (Figure 3.4). As expected, the majority of the firms are based in the United States. In addition, the study sample contains firms with headquarters in 22 different countries. The majority of the sampled firms 45% are aged in the range of 21-50 years old (Figure 3.5). Further details of the firms included in Study 2, such as Revenues (used as a proxy for firm size), country headquarters and sub-sector operating, can be found in Appendix 1. The names of the firms are not listed due to data restrictions.

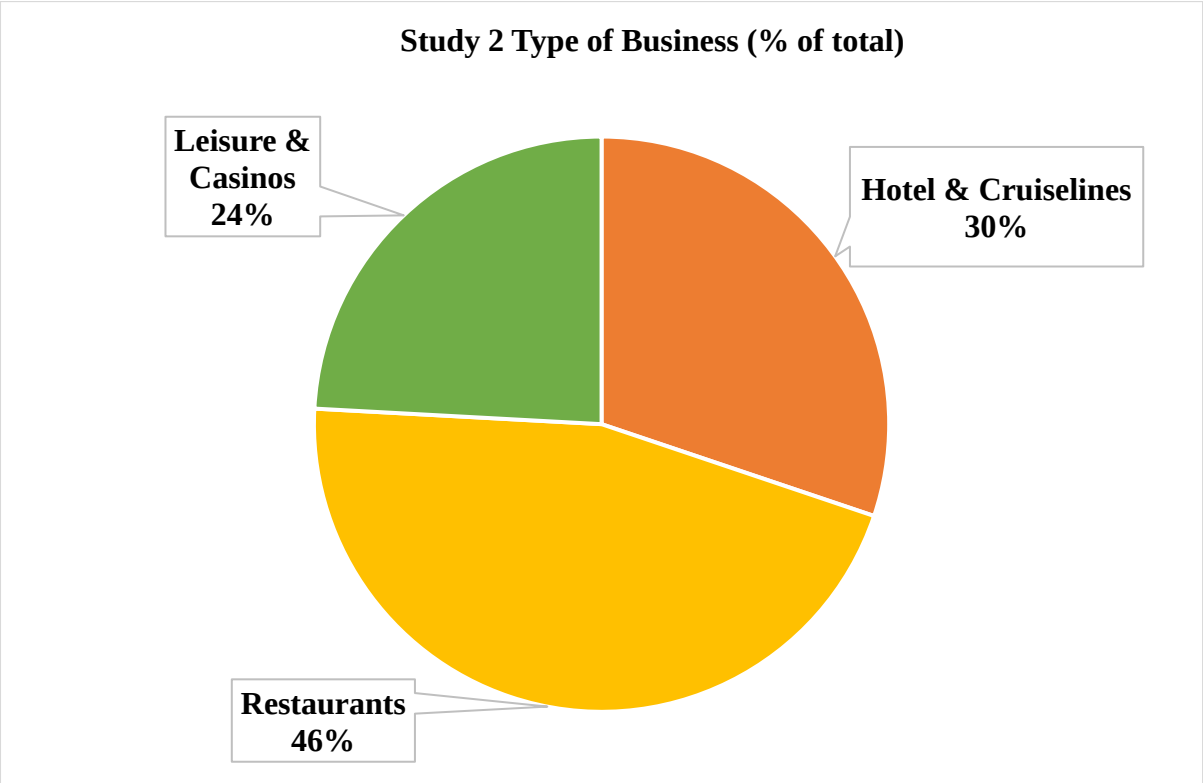

Figure 3.3: Sample distribution based on GICS sub-industry categorisation

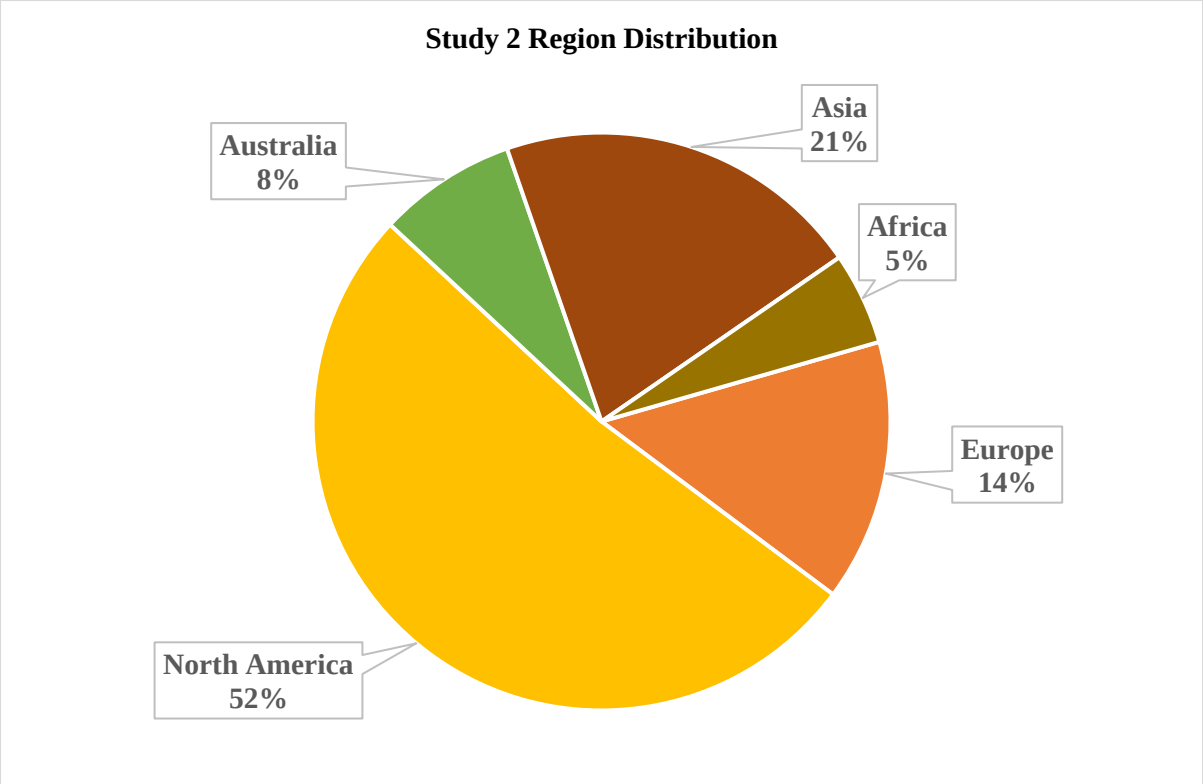

Figure 3.4: Sample distribution based on companies' headquarters region location

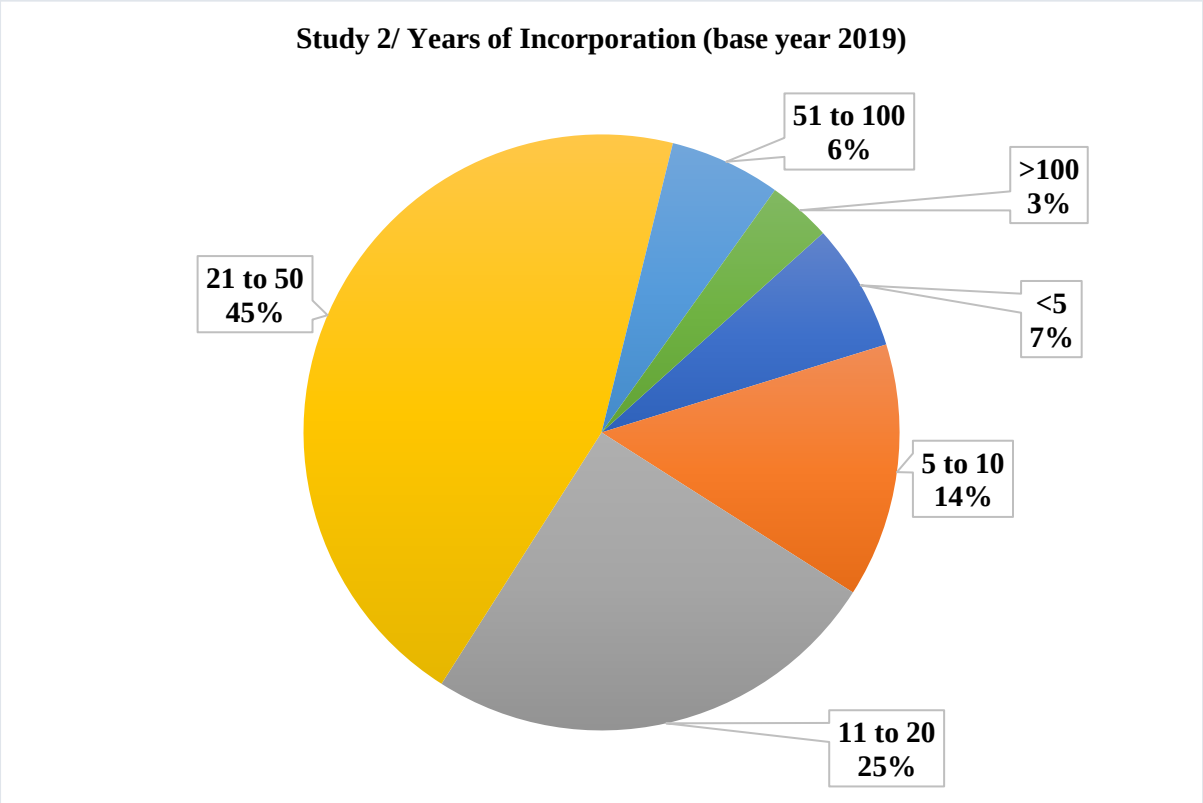

Figure 3.5: Percentages of the total number of firms according to their years of operation

Study 3 (Chapter 6) initial sample comprised 183 firms, of which 40 had to be removed because of either lack of environmental data or providing only online platform booking and review services. The final sample of 143 firms consists of 30 Hotels and Cruise lines, 58 Restaurants, and 55 Leisure and Casinos. The corresponding % can be found in Figure 3.6. Similarly, with Study 2, most of the firms' headquarters are located in North America 48% (Figure 3.7), particularly the U.S. Study 3 encompass firms from 29 different countries. The majority of the sampled firms are aged between 21-50 years (Figure 3.8). Full details of the sample can be found in Appendix 2

The study sample represented 6.7% of the global travel & tourism revenue output generated in 2016, with 42.46% of the industry being large corporations registered in stock markets and covered under the Thomson Reuters ESG Database. However, it is essential to highlight that the global travel & tourism industry includes enormous sub-industries, such as aviation, which is out of this study's scope. Also, a large share of the hotels and resorts globally is based on small firms that are not stock market listed or archived in the Thomson Reuters database.

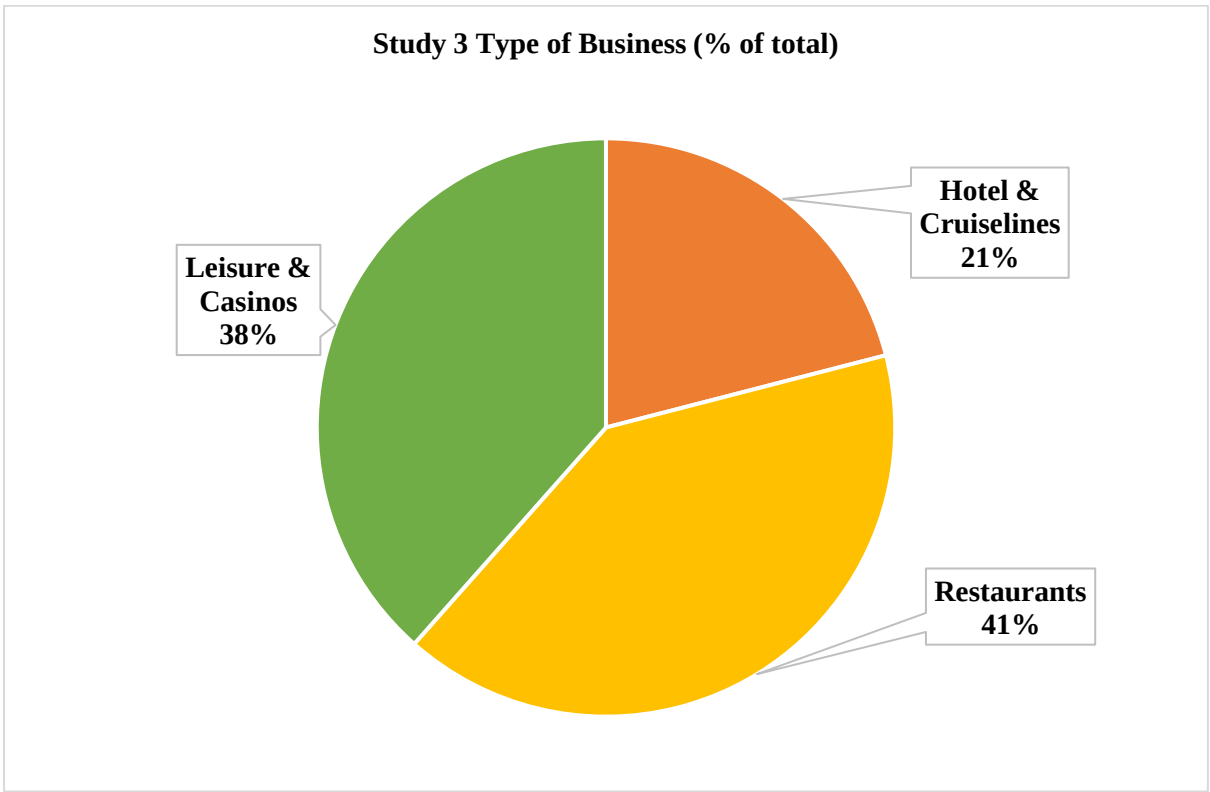

Figure 3.6: Sample distribution based on GICS sub-industry categorisation

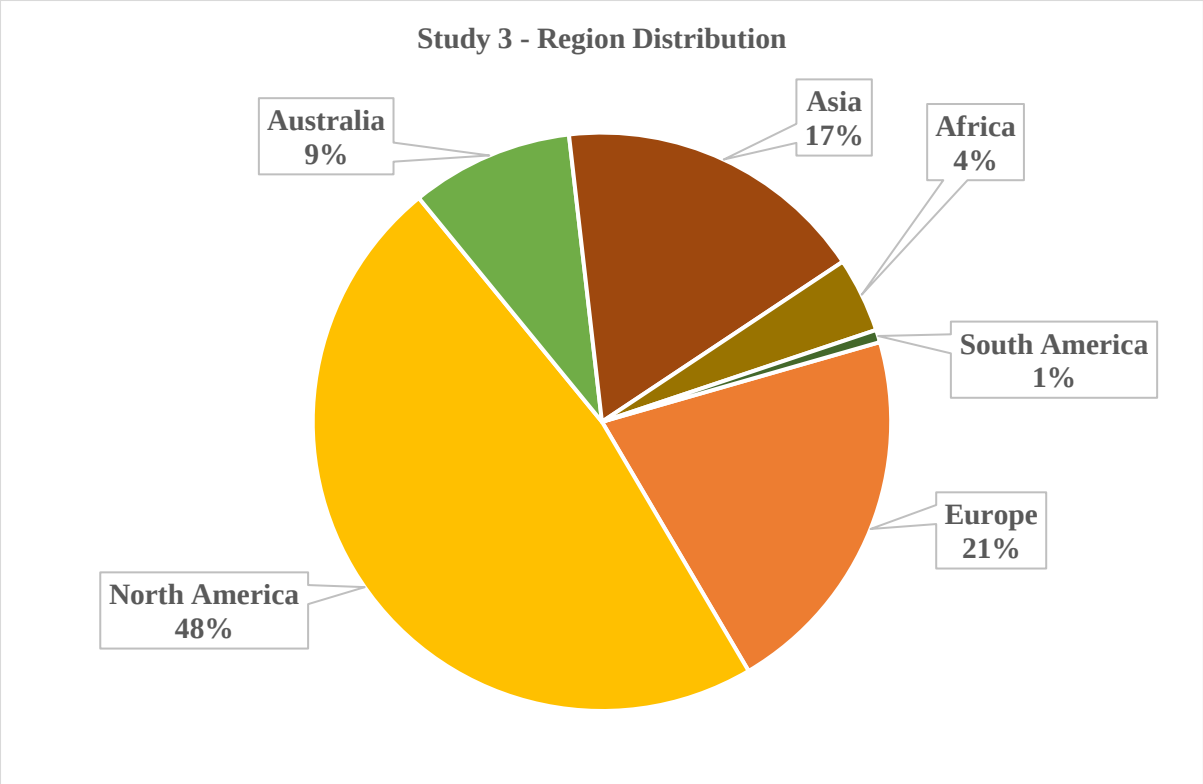

Figure 3.7: Sample distribution based on companies' headquarters region location

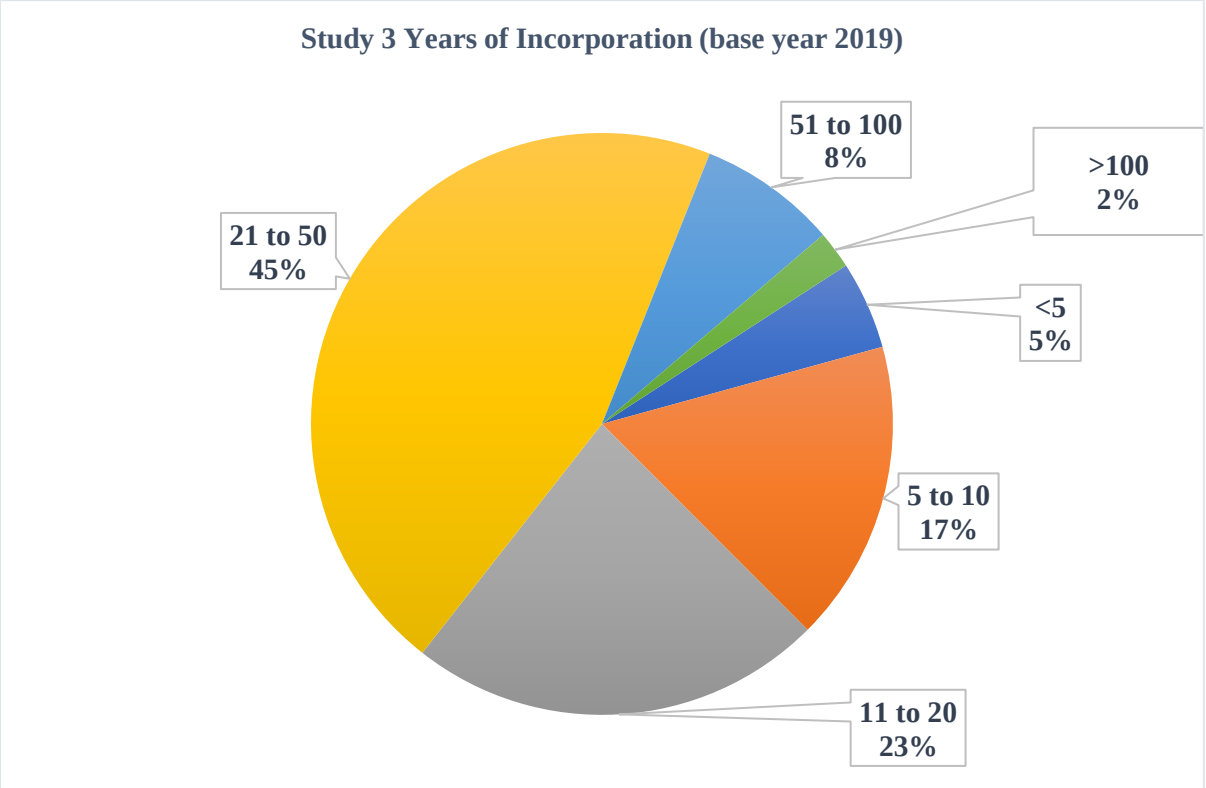

Figure 3.8: Sample distribution based on companies' headquarters region location

3.3.2 Variables Operationalization Empirical Study 2, Chapter 5

3.3.2.1 Environmental Organizational Drivers and Environmental Strategy Performance

The proposed dimensions of environmental, organisational governance and strategy performance were created using the Thomson-Reuters Eikon database. The concepts and scales of the constructs were categorised following a rigorous methodology to ensure reliability, transferability and relevance of these concepts within an inter-organisational business context with a particular focus on the tourism industry. Firstly, a complete list of the items included in the database was discussed with a panel consisting of three sustainability experts. The panel was asked to identify the most critical items that can act as antecedents for deploying an eco-friendly strategy. Beyond panel experts' categorisation of the items, cross-validation was employed from the theoretical categorisation identified in the literature. Thus, robust and reliable constructs generating informative and credible measures are ensured.

The Boolean data were converted to numeric values 1/0, and a composite of the arithmetic average for each dimension was constructed. The resulting construct was used accordingly for the analysis carried out later. Environmental corporate governance was operationalised with three multidimensional scales focusing on Green Human Resource Management (3 items), Environmental Proactiveness (4 items), and Environmental Orientation (5 items). The operationalisation of sustainability practices was based on multidimensional scales as follows: Green Procurement (3 items); Product / Service Eco-Friendliness (4 items); Waste / Emissions reduction (3 items); and Resource Efficiency (4 items).

3.3.2.2 Financial Variables

Finally, the financial measures, namely leverage, size and Return on Assets, were extracted from a combination of Thomson Reuters DataStream and Eikon platforms to ensure maximum data completeness. Practitioners widely use the Return on Assets performance metric as an accounting variable to measure a firm's efficiency in turning its assets into profit for a particular fiscal year, representing a short-term profitability metric. Within Reuters Eikon, it is calculated by dividing a firm's net income prior to financing costs by total assets. The broader literature argues that Return on Assets has been the best overall measure of financial performance (Fraser and Kolari, 1985; Dehning and Stratopoulos, 2002; Rothschild, 2006; Youn and Gu, 2007;

Theodoulidis *et al.,* 2017). The inclusion of both net income and total assets of a firm allows the utilisation of a firm's profitability and efficiency. The selection of Return on Assets was made purposely as it incorporates both the net income and the firm's total assets; hence, it can measure both its efficiency and profitability. Barney (1991) indicate a firm's resources as a mean of strategic competitive advantage, while Hart (1995) applies the Resource-based View within an environmental context and Return on Assets incorporates the most direct information about the chosen allocation of the resources examined (Youn and Gu, 2007). The sole dependent variable of this model was the relative return on assets. The return on assets (ROA) is a good indicator of a firm's performance, insofar as it represents its ability to reward invested capital, independently of its origin (equity or loans), also allowing the different firm sizes to be relativized (Rodríguez and Cruz, 2007). The metric can be increased either by achieving higher net income for a certain amount of assets or generating a certain income while using fewer assets.

3.3.2.3 Control Variables

The regression analysis considers three different variables to control for governance drivers' possible effect - environmental strategies, performance link and environmental performance – financial performance link. The control variables of size and years since incorporation are used in the examination of both relations. The company's business type and leverage are used for governance drivers - environmental strategies and financial performance links, respectively.

Several studies are supporting the significant effect of firm size on both sustainability and financial performance metrics. Large firms tend to adopt environmental strategies more frequently than smaller firms due to higher stakeholder pressures (Waddock and Graves, 1997). Additionally, according to Ullmann (1985), larger firms will have more financial resources to invest in Corporate Social Responsibility issues where related environmental practices are incorporated as a dimension of CSR. Finally, based on the economies of scale theory, large firms can achieve better financial performance compared with smaller firms; hence, a positive relationship between firm size and profitability is proposed (Chauvin and Hirschey, 1993). Consistent with previous literature (Lee and Park, 2009; Inoue and Lee, 2011), firm size is controlled using the log transformation of total sales to reduce the disparity between very big and small firms.

Previous literature points toward the direction that the number of years of a firm's operation impacts on both environmental and financial performance. According to Fraj, Matute, and Melero (2015), hotels operating for more years in the industry are more experienced in utilising their organisational capacity and competitive advantages. In general, more mature companies can benefit from long-lasting relationships with their suppliers, customers and other external stakeholders (Calantone, 2002). However, while age may be an indicator of experience, it could also be a sign of 'sclerotic' thinking and managerial immobility negatively affecting performance (Love, Roper and Zhou, 2016). In such cases, the negative effect of age may also be pronounced in a company's environmental performance as establishments with old facilities tend to adopt fewer environmental protection measures (Gil, Jiménez and Lorente, 2001). In line with previous literature (Shu *et al.*, 2015), a logarithmic transformation has been used since the year of incorporation to control for the effect of a firm's age. Despite all companies operating in the tourism industry, the type of business is controlled to access environmental performance as hotels might have diverging priorities to those of restaurants and leisure businesses; thus, hindering their capacity to address environmental issues.

The effect that leverage has on financial performance is also controlled. High-risk tolerance firms are more vulnerable to financial issues compared to lower leverage ones that appear to behave better financially (Capon, Farley and Hoenig, 1990; Inoue and Lee, 2011). High leverage, sourced from high dept value, might indicate financial problems and is considered the main characteristic of companies facing bankruptcy risk. Pecking order theory, as used by Myers (1984) states that firms choose capitals according to the following preference order: internal finance, debt, equity. Debt has a cost, and higher debt levels will imply higher cost levels, which could lead to bankruptcy. Therefore, a negative relationship is expected between leverage and firm performance since profitable firms are expected to have less leverage in their capital structure. In a tourism industry context, Chen (2010) argue that hotels with lower debts in Taiwan perform better financially, while Al-Najjar (2015) confirmed the result for publicly listed tourism firms in Jordan. Leverage was calculated as the ratio of a firm's total debt over equity (Phillips and Sipahioglu, 2004; Ross, Westerfield and Jordan, 2008).

3.3.3 Variables Operationalization Empirical Study 3, Chapter 6

3.3.3.1 Organizational Capabilities

A summary of the variables used in the study and their operationalization is provided in Appendix 9 and Appendix 10. Indices for organizational capabilities were developed based on the theoretical categorization of environmental practices identified in the literature. Thus, categorization was not based on random aggregation of items that would not generate informative or credible measures. In contrast, the underlying theoretical concepts provided indices that were developed to be robust and reliable. “Green corporate governance” and “Quality assurance capability” comprised of two and three items, respectively, which were extracted from ESG Boolean data that were converted to numeric 1/0 values. The arithmetic mean of the items was therefore used, providing indices ranging between 0-1.

3.3.3.2 Organizational Resources

Financial ratios from both Thomson DataStream and Eikon platforms were used to assess the level of organisational resources. Following Waddock and Graves (1997), the previous financial year Return on Assets was employed to capture the potential financial slack available for use. Thus financial slack referred to 2015 to account for the firms' financial situation in the year of the implementation of the strategy. With regard to measuring HR resource slack, the quotient of the division between the number of employees and sales is used, without adjusting for industry norms since the focus is on a sole industry (Mishina, Pollock and Porac, 2004; Mellahi and Wilkinson, 2010). To identify the items operationalizing the 3 Rs environmental strategy, I used as keywords “Reduce”, “Reuse”, and “Recycle”, as well as any other explanatory phrases implying such green dimensions. This led to the identification of seven items operationalizing this construct, the arithmetic average of which was used as a composite index.

To measure business performance, two indicators were selected from Thomson Reuters DataStream, and Eikon Platforms in 2017, namely net profit margin and Tobin’s Q. Practitioners widely use net profit margin as an indicator of a company’s management ability to generate profit relative to its sales, after relative costs of goods sold and expenses are subtracted. Tobin’s Q is defined as the ratio asserting a company's stock value relative to the

necessary cost to replace the existing company. It is a robust measure accommodating changes in accounting prices, forward-looking, and risk-adjusted (Inoue and Lee, 2011; Montgomery *et al.*, 2018). Tobin's Q values were calculated using the sum of Equity Market Value plus the Liabilities Book Value divided by the sum of the Equity Book Value and Liabilities Book Value, giving the company's market value over the replacement value of the book entity.

3.3.3.3 Control Variables

The regression analysis consists of four variables to control the possible effect of organizational resources and capabilities on the 3 Rs environmental strategy and the latter's impact on business performance. The introduction of the control variables is intended to rule out alternative explanations of the findings for an examined relationship (Schmitt, Klimoski and Rowland, 1991). Although the role of control variables is secondary as they are not the main point of interest, their inclusion is vital in the study design to make accurate claims about the real impact of the independent variables examined (Allen, 2017). Therefore, the selection of the control variables is made based on previous literature indicating that there is a significant effect of the control variable at the dependent variable examined. Similarly, the following text explains the rationale of the control variables of the study.

Several studies support the significance of firm size on both sustainability and business performance, with large companies adopting environmental strategies more frequently than smaller ones due to higher stakeholder pressures (Dief and Font, 2010). Consistent with previous literature, the firm size was controlled using the operationalization of the log transformation of total revenues.

Previous research also stresses the role of firm age in adopting environmental strategies. There are two schools of thought are identified through the literature; thus, there is no clear direction on whether this effect is positive or negative. The first one supports that older, more experienced firms utilised mature environmental capabilities that affect their decision making in adopting proactive environmental strategies (Darnall, Henriques and Sadorsky, 2010; Adomako, Ning and Adu-Ameyaw, 2021). On the other hand, the alternative tank of thinking supports that older and well-established firms are more reluctant to change; thus, changing their environmental behaviour is less likely than younger firms (Delmas and Montiel, 2009; Singh, Jain and Sharma, 2014). Therefore, in line with previous literature (Shu *et al.*, 2015)

firm age was operationalised using the logarithmic transformation of the years since incorporation.

Although the companies included in the sample operate in the tourism and hospitality industry, the control effects of specific sub-sectors within this industry were examined (i.e., Hotels resorts and Cruise lines, Restaurants, Casinos, and Leisure facilities) since there are hints in the literature that they have different priorities concerning environmental initiatives. A final control employed is the type of country where the headquarters of the companies included in the sample are based, which was identified from the MSCI provider of equity indices. Countries were categorized into developed and emerging, expecting companies located in developed countries to more prone to adopting pro-environmental 3 Rs practices.

4. A Review of the Antecedents and Performance Outcomes of International Environmental Marketing/ Management Strategies

4.1 Introduction

A wide range of stakeholders aim to control and mitigate environmental degradation varying from institutions, NGOs, civil society, and firms (Kumar, 2016; Goworek *et al.*, 2018). The firm's interaction with the natural environment has been a point of interest from multiple fields for many years, but received attention from marketing and management scholars only in late 1960 (Leonidou and Leonidou, 2011). Early articles referred to environmental concerns as part of the firm's overall social responsibility in a national context (Kotler and Levy, 1969). Whereas, the first articles examining corporate environmental sustainability in international business, research at the firm level, appeared years later.

It was not until the early 2000s following the Kyoto Protocol's milestone as the international community's first binding agreement to establish measured targets to tackle climate change that the first articles appeared. The growing globalization trends force firms to demonstrate responsible citizenship for sustainability not only in their home market but also in host countries. For example, Christmann and Taylor (2001) examined the effects of globalization,

on firms operating at developing host countries, on promoting proactive self-regulation of their environmental footprint being among the first studies concerned with the environmental sustainability of firms with international activities. Additionally, the vast majority of emissions pollution worldwide is attributed to large multinational companies. In particular, a report released recently (Griffin and Heede, 2017) revealed that just 100 companies (all of them operating in activities of international nature) are responsible for 71% of global emissions (Riley, 2017).

Moreover, the raised pressures from environmental stakeholders and particularly NGOs along with the rise of social media platforms redefine activism and advocacy as the environmental actions of corporations are easily and rapidly accessible to the wider public. The public pressure brings environmental sustainability issues higher in the agenda of politicians as voters highly value environmental actions. This can be demonstrated by the trend of significantly higher support of the public towards green political parties and the widespread use of environmental issues in candidates' manifestos. A recent example is U.S president John Biden's climate manifesto, where his approach towards climate change compared with his opponent is considered a key point for his election (South, Vangala and Hung, 2021). In the United Kingdom's 2019 general election, the political manifestos of each party made extensive reference to their environmental plans and gained much greater prominence than in previous elections (Carter and Pearson, 2020). The political drive for tackling climate change creates an environment where corporations need to act. That could be in the form of a genuine effort to reduce their carbon footprint or an attempt to influence political decisions, lobbying against environmental legislation or greenwashing (Levy, 1997; Dahlmann, Branicki and Brammer, 2019). An increased number of corporations, with an international presence, are engaging in the disclosure of their environmental actions as part of the Carbon Disclosure Project, Global Reporting Initiative and numerous other standards, which subsequently helps on the increase of available data for researchers to implement relevant studies.

The origin of the Corporate sustainability concept is found on Brundland's commission, formerly the World Commission on Environment and Development, report (WCED, 1987), defining 'sustainable development' as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Existing literature used various definitions of the term depending on the author's field of study and how they perceive sustainability (Glavič and Lukman, 2007). The existing literature indicates an ambiguity on the

number of dimensions that should be incorporated in the concept. That could be tridimensional (Bansal, 2005) in terms of social, environmental and economic dimensions, bidimensional (Hall and Vredenburg, 2003) in terms of social and environmental dimensions and lastly, as a single dimension concept focused on the environment (Marshall and Brown, 2003). The first empirical studies in management literature that introduced 'ecological sustainability' are dated back to 1995 (Shrivastava, 1995; Starik and Rands, 1995). Since the focus of the thesis is solely on the environmental activities of firms, I am following Montiel and Delgado-Ceballos (2014) proposal and refer to 'corporate environmental sustainability' throughout the rest of the document.

Although the growth of articles written on corporate environmental strategies with firms engaging in international business activities has been relatively slow, a significant volume of articles has been accumulated to warrant a sufficient sample for review and synthesis. The first stream of systematic reviews examines the existing literature of corporate sustainability as an inclusive concept. Based on Bansal's (2005) definition, corporate sustainability can be placed on the interception of economic development, environmental protection and social responsibility. The first stream of systematic reviews examines the existing literature on corporate sustainability as an inclusive concept. Those reviews were found to either systematically access the literature with or without restrictions on the study context, firm characteristics or specific topic associations involved. For instance, Peloza and Shang (2011); Engert, Rauter and Baumgartner (2016); Kolk (2016) review the extant literature to outline the CSR activities and their outcomes and provide an agenda for future research. Hinze & Sump (2019), systematise the current state of research on the association between companies' corporate social responsibility (CSR) engagement and financial performance while providing future directions that contribute to further exploration of the link between CSR and financial performance.

Further reviews narrow down their scope by focusing on different characteristics of the studies examined. For example, those could be within an international context (Eteokleous, Leonidou and Katsikeas, 2016; Pisani *et al.*, 2017) and the internationalisation CSR strategies of firms. Further reviews focus on certain characteristics of firms such as SMEs (Vázquez-Carrasco and López-Pérez, 2013; Bikefe *et al.*, 2020) or family businesses (Lv, Li and Mitra, 2020). Finally, another stream of review papers focused on specific industries such as hospitality and

tourism (Font and Lynes, 2018; Rhou and Singal, 2020), manufacturing (Gbededo, Liyanage and Garza-Reyes, 2018) or the banking sector (Tran, 2014; Ruiz and García, 2021).

The second stream of Systematic Reviews focuses on the environmental dimension of sustainability rather than as a part of the overall CSR. Leonidou and Leonidou (2011), in a bibliographic review of the existing literature on environmental issues, indicated its serious transformation from an identification and exploration phase to an advanced phase characterised by greater maturity and rigour in terms of topics researched, methodology, content, and context. Additional review studies focused on the relationship of green strategies and performance outcomes, indicating that a positive relationship is predominant in the literature (Ambec and Lanoie, 2008; Molina-Azorín *et al.*, 2009). Finally, Gupta and Kumar (2013) reviewed the literature to understand the capacity of sustainable green initiatives to individually create new opportunities for firms when embedded in the corporate culture.

In terms of industry-specific studies, those focused mainly on the service industry narrowed down by firm size or activities. For example, Aykol and Leonidou (2015) narrowed their review on SMEs while Centobelli, Cerchione and Esposito (2017) focused on transportation and logistics service providers confirming the atheoretical and fragmented nature of environmental sustainability empirical findings. Furthermore, a number of reviews focus on certain sub-topics and paradigms of environmental sustainability such as circular economy (Rosa *et al.*, 2020), lean and green paradigm (Garza-Reyes, 2015) and green marketing (McDonagh and Prothero, 2014). Finally, a number of reviews shift their focus on green supply chains to examine the role of environmental sustainability in transport mode decisions (Bask and Rajahonka, 2017) and identify the tiers of the supply chain in green performance assessment (Tuni, Rentizelas and Duffy, 2018) and the role of different antecedents (Graham, 2018).

Contrary to other review studies examining corporate environmental research (Leonidou and Leonidou, 2011; Aykol and Leonidou, 2015), no such attempt has yet been made in an international business context. However, this is of paramount importance in light of the vague conceptualization of sustainability by researchers (Bansal and Song, 2017), the great fragmentation among the topic's antecedents and the incongruity on evaluating its outcomes. The aforementioned constitute a crucial barrier for practice development, policymaking and theory advancement (Eccles, Ioannou and Serafeim, 2012). Indeed, the existing research has

been criticized for not providing a clear, structured framework for managers on the operationalization of environmental strategies neither addressing specific issues arising within the international business field with its particularities. In view of these issues, there is a need to systematically review and assess comprehensively the extant body of research on international environmental marketing/management strategies' antecedents and performance outcomes.

Previous review studies have assisted in understanding the integration of the theoretical and empirical work on the subject. However, insightful and useful these reviews are, they present some vulnerabilities. They often tangentially tackle the scope of the research of the studies, little information is provided on the methodological issues researchers face, restrict their focus only on a specific type of company or industry or fail to provide a comprehensive picture of the literature as they limit their focus to a smaller number of thematic areas avoiding the facilitators or outcomes of eco-friendly strategies. Most importantly, they do not pay sufficient attention to the future directions given by the existing studies; thus, they fail to provide guidance for future trends in the field.

The purpose of this Systematic Review is to fill those gaps by identifying, synthesising, and evaluating the extant research on environmental marketing and management to reveal trends in the field in terms of methodology, topics examined, research context, and variable measurement. In doing so, this review intends to (a) identify and analyse the theoretical background of this line of research; (b) assess the research methodologies employed by previous empirical studies; (c) identify and assimilate the key thematic areas and specific topics addressed by prior research; (d) identify the key variables used in the existing literature and create a thematic categorisation of different topical levels; and (e) to develop an agenda for future research on the subject. The latter is accomplished by extensively analysing the existing future directions of the last five years' studies and, from the interpretation of the review analysis results, identifying gaps in existing research in terms of context, methodology, theoretical approach and topics tackled.

The remainder of the Chapter is organised into the following four sections. First, a descriptive analysis indicates the main journal outlets and research fields, the research scope of the articles examined, and their features. The second section analyses the theories used in association with the study results to examine the effectiveness of the theories used in conjunction with the

particular concepts and topics. Third, an intense empirical analysis is performed based on each variable used in the text, and a topic classification is synthesised. Fourth, future directions' different themes are classified based on their content; thus, the major research theme and methodological related future directions of the last five years are summarised. The investigation approach adopted in conducting the review is explained in section 3.2 as part of the different methodological approaches followed in the thesis incorporating the drafting of a coding scheme and the collection of the articles used.

4.2 Descriptive Article Analysis

4.2.1 Journal Articles and Fields of Research

The journals were clustered following Pisani et al. (2017) categorizations in three broad fields, namely: International Business Journals, Management and Marketing Journals, and CSR/ Environment related journals. Altogether, 118 articles were identified in 17 International business Journals, 12 CSR/ Environment topic-specific journals and 19 Management/ Marketing journals totalling 48 different academic journal outlets between the years 2001 and 2019. The articles included in the top tier (journals ranked as 3, 4, 4* in the CABS list) were 71.4% of the sample. On the same vein, using the Scimaco Journal Rankings citation index (2019) to measure scholarly journals' scientific impact, 98.3% of the articles were classified as Q1, i.e., belonged to the top 25% of journals for at least one of its assorted sub-disciplines.

In the International Business field, the "Journal of World Business" dominated with 19.4 percent of the articles while the "Journal of Cleaner Production" led the CSR/Environmental field with 28.6 percent. The "Industrial Marketing Management" journal was the most popular journal in the Management/Marketing field with 14.8 percent (see Appendix 3 for the full list of sources). As anticipated, most of the articles were published in the CSR/ Environmental topic-specific Journals accounting for 47.1 percent of the total publications while 30.3 percent of the articles were published in international business-related journals leaving a 22.7 percent in general Management/ Marketing journals. The distribution of articles among different fields indicates that the international environmental strategy literature's focus is widely spread across business research disciplines.

A clear growth trend (Figure 4.1) is observed through a historical analysis of the number of articles published over the past two decades projected along with a timeline indicating the major UN International Climate Agreements. A substantial growth is observed in 2018, which may be attributed to the increased interest the topic received after the historical Paris agreement, which took place at the end of 2015 and entered into force in 2016. The two years lag is expected due to the time needed for the article's life cycle for inception to publication. The increase in publications is more profound in Management/ Marketing and CSR/Environmental specific journals rather than the International Business journals.

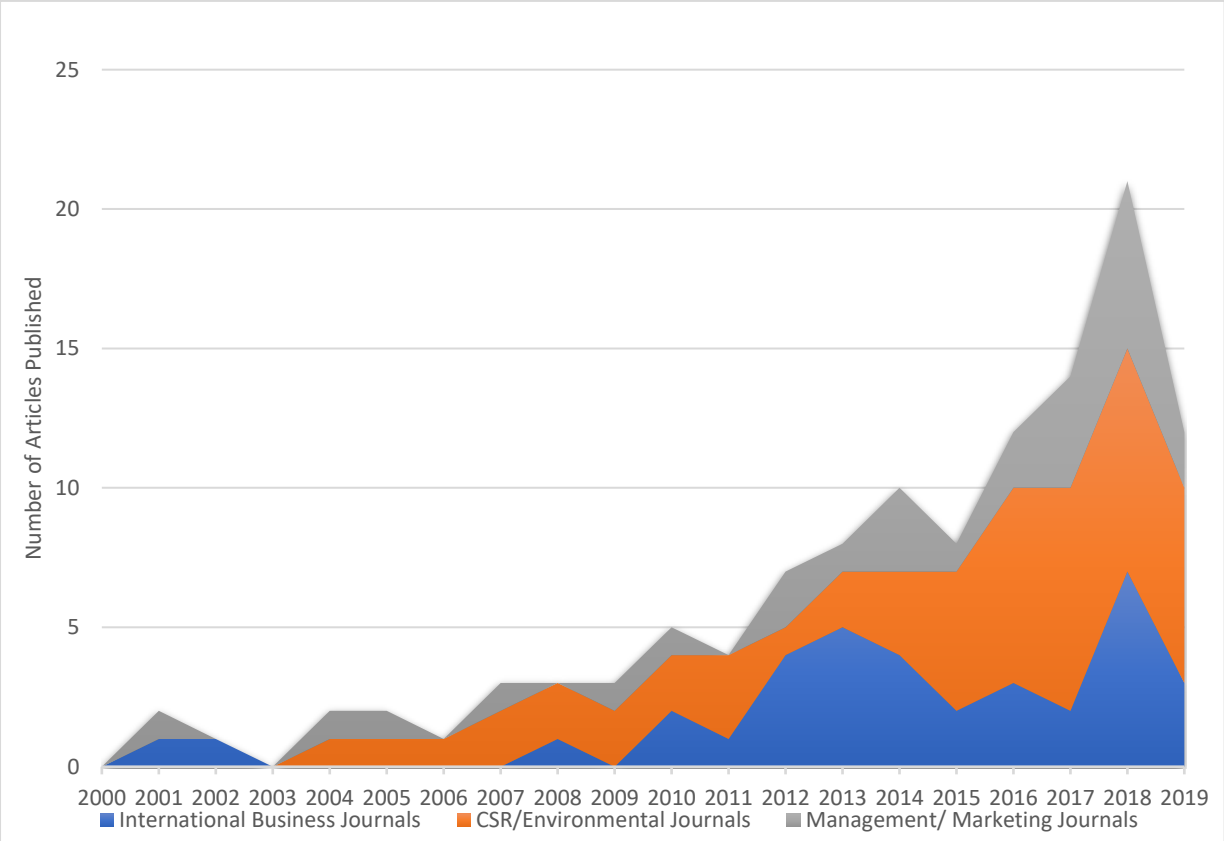

Figure 4.1: Showing the trend of publications over the years

Table 4.1: Number of Publications Per Journal

Journal	Number of articles in the sample	ABS Rank	Scimaco Rankings
International Journals			
Journal of World Business	7	4	1
International Business Review	5	3	1
International Journal of Production Economics	4	3	1

International Journal of Production Research	3	3	1
Journal of International Business Studies	2	4*	1
International Marketing Review	2	3	1
Journal of International Marketing	2	3	1
International Journal of Contemporary Hospitality Management	2	3	1
Management International Review	1	3	1
International Journal of Operations and Production Management	1	3	1
Journal of International Management	1	3	1
International Review of Financial Analysis	1	3	1
Multinational Business Review	1	2	1
Journal of Global Marketing	1	1	2
International Entrepreneurship and Management Journal	1	1	1
International Review of Applied Economics	1	1	2
International Journal of Logistics Research and Applications	1	1	1
CSR / Environmental Journals			
Journal of Cleaner Production	16	2	1
Business Strategy and the Environment	13	3	1
Corporate Social Responsibility and Environmental Management	5	1	1
Journal of Business Ethics	5	3	1
Ecological Economics	5	3	1
Journal of Environmental Management	4	3	1
Organization and Environment	2	2	1
Environmental and Resource Economics	1	3	1
Energy Economics	1	3	1
Transportation Research Part D: Transport and Environment	1	3	1
Environmental Science and Technology	1	3	1
Journal of Environmental Economics and Management	1	3	1
General Management/ Marketing Journals			
Industrial Marketing Management	4	3	1
Strategic Management Journal	3	4*	1
Journal of Management Studies	3	4	1
Supply Chain Management	2	3	1
Organization Science	1	4*	1
Academy of Management Journal	1	4*	1
Journal of the Academy of Marketing Science	1	4*	1
Journal of Operations Management	1	4*	1
British Journal of Management	1	4	1
Tourism Management	1	4	1
Long Range Planning	1	3	1
Management and Organization Review	1	3	1
Production Planning and Control	1	3	1
Journal of Business Research	1	3	1
Management Decision	1	2	1
Journal of Business and Industrial Marketing	1	2	1

Industry and Innovation	1	2	1
Journal of Purchasing and Supply Management	1	2	1
Journal of Manufacturing Technology Management	1	1	1

4.2.2 Scope of Research

In the first chronological period of the review (2001-2007), the data samples focused on North American and European companies. In that first period, firms in Africa and Latin America are not featured, and only Chinese firms were studied. Throughout the studied period, there has been a gradual shift of interest from North America to the rest of the world. At the same time, an increase in the number of host countries involved is observed as studies started to examine the effects of different countries' institutional settings. The geographical attention of studies is found to be well-diversified throughout the last chronological period (2014-2019), which can be attributed to the growing international concern for climate change and the rise of international business. The aforementioned is in line with the increased availability of data for regions such as Asia, Africa and Latin America. Approximately half of the studies were focused on one region while an increasing trend on the studies incorporating firms around the globe is observed.

The majority of the studies were not industry-specific, and they incorporate a wide range of industries with the effect of particular industries was used as a control variable in some manuscripts. Occasionally, this resulted in misinterpretation of the results when the specific industry characteristics were not appropriately treated. However, it allowed the researchers to account for interaction effects of different external environment conditions (competitive intensity, regulatory conditions, polluting levels). The main research volume involved secondary sector economic classification firms with an increased focus on polluting manufacturing companies.

There is a substantial body of literature involving firms from the primary sector of the economy (34.5 percent); however, most of that is based on mixed samples involving other economic sectors. Precisely, only two papers focused solely on primary economic activities. Those focused on extractive industries (Symeou, Zyglidopoulos and Williamson, 2018) and oil mills (Achabou, Dekhili and Hamdoun, 2017). Studies focusing on service-tertiary economic sector activities exclusively accounted for 6.7 percent. Expressly, these referred to logistic services

(Sinnandavar, Wong and Soh, 2018), financial services (Gangi et al. 2019; Mengze and Wei, 2015) retail industry (Hendriks, Slangen and Heugens, 2018) and tourism-related industries (E. S. W. Chan, 2013; Hsieh, 2012; L. C. Leonidou et al., 2015; Perez-Valls et al., 2016). The tertiary-service sector of the economy, gain growing attention during the last chronological period examined (2014-2019) as a result of the increased pressure from consumers and the phenomenon of consumer environmentalism (Lee *et al.*, 2020).

In the vast majority of the articles, the unit of analysis was the firm, since the study's topic explicitly concerned firms' environmental practices in a global context. Only one study (Chan, 2013) identified using a combination of firm and consumer data to compare managers' and consumers' perception on hotel green marketing-related activities. A small segment of the research relied on websites or advertisement materials content (Gallego-Álvarez, Rodríguez-Domínguez and García-Sánchez, 2011; Hsieh, 2012; Leonidou *et al.*, 2014) to evaluate the green communication practices of firms. The majority of the articles' focus was on multinational firms, with 49.6 percent of the samples used limiting their focus on them, while 21 percent of the articles focused on the firms' exporting activities irrespectively to their multinational identity. The remaining of the studies used samples integrating different types of firms either to control for the type of the firm or due to the international nature of the sample chosen. Studies dealing solely with domestic firms were not involved as this was out of the review scope and selection criteria.

Table 4.2: Scope of Research Review Results

	Total N=118 % (1d.p)	2001-2007 N1=11	2008-2013 N2=30	2014-2019 N3=77
*Focus Region**				
North America	49.6	72.7	46.7	47.4
Europe	64.7	45.5	76.7	62.8
Asia	61.3	36.4	60.0	65.4
Africa	23.5	0.0	13.3	30.8
Australia	24.4	9.1	23.3	26.9
Latin America	28.6	0.0	30.0	32.1
Focus Regions Involved				
One	52.5	54.5	46.7	54.5
Two-Five	29.7	45.5	40.0	23.4
Global	17.8	0.0	13.3	22.1
Host Countries Involved				
One	40.7	54.5	43.3	37.7
Two	2.5	0.0	0.0	3.9
Three	0.8	9.1	0.0	0.0

Four or More	55.9	36.4	56.7	58.4
Number of Industries Covered				
One	36.4	18.2	30.0	41.6
Two	3.4	9.1	3.3	2.6
Three	3.4	9.1	6.7	1.3
Four or More	56.8	63.6	60.0	54.5
*Economic Sector Classification**				
Primary	34.7	18.2	33.3	37.7
Secondary	89.0	90.9	93.3	87.0
Tertiary-Service	39.0	27.3	33.3	42.9
Not Available	2.5	9.1	0.0	2.6
Number of Economic Sectors Involved				
One	59.3	63.6	63.3	57.1
Two	11.0	9.1	13.3	10.4
Three	27.1	18.2	23.3	29.9
N/S	2.5	9.1	0.0	2.6
*Unit of Analysis**				
Firm	95.8	100.0	86.7	98.7
Consumer	0.8	0.0	3.3	0.0
Website/Ads	5.1	0.0	13.3	2.6
Other	0.8	0.0	0.0	1.3
*Firm types**				
Multinational Firms	76.3	90.9	76.7	74.0
Exporting Firms	26.3	9.1	23.3	29.9
Domestic Firms	47.5	27.3	50.0	49.4
Number of Firm types Involved				
One	70.3	72.7	73.3	68.8
Two	9.3	27.3	3.3	9.1
Three	20.3	0.0	23.3	22.1

4.2.3 Manuscript Features

Table 4.3 presents the results of the methodological assessment of the articles under investigation. A quantitative approach was used in 95.8% of the articles, attributed to the research complexity requiring a study to incorporate a cause and/or an effect of an environmental strategy. The overwhelming majority of the studies reviewed used cross-sectional data for their analysis with an increasing tendency for longitudinal data in the last chronological period of 2014-2019.

The wide use of cross-sectional data can be attributed in data scarcity for different years, the simplicity of analysing cross-sectional data and the administrative burdens of primary source

longitudinal data collection. Despite the persistent calls in the literature (Akhtar et al., 2018; Gangi et al., 2019; Kang and He, 2018; L. C. Leonidou et al., 2015; Perez-Valls et al., 2016; Wu, 2015) to embark on longitudinal monitoring of changes in the ecological behaviour of firms, only recently there is a relative increase in studies adopting this approach (e.g., Ellimaki et al. 2019; Kim, Moon, and Yin, 2016; Q. Li, Xue, Truong, and Xiong, 2018). The employment of longitudinal studies could ease the causality concerns raised in corporate environmental sustainability studies by answering the question of whether performance outcomes are improved upon the adoption of environmental practices or if firms are adopting eco-friendly practices because they are already in a better financial position.

Regarding sampling methods, most studies used samples exceeding 100 cases which is adequate for objective assessments and generalization of research findings. Notably, studies with small samples were gradually decreased through the years and were predominantly found in qualitative method studies (Galeazzo, Furlan and Vinelli, 2014a; Bıçakcıoğlu, 2018) which is not unusual. Data collection equally distributed between primary and secondary data sources, and only 3.4 percent used mixed data. The use of secondary data is gradually increased through the years following the increase in secondary sources availability and quality.

The most popular primary data collection instrument was surveys (reported by 49.6 percent) as anticipated by the sharp increase in electronic means, making the distribution of questionnaires less time-consuming. An additional 11.8 percent collected data through personal interviews of the informants. In most studies, the key informant was the firms' general manager while in a handful of cases (Ramus, 2002; Czerny and Letmathe, 2017; Li, Zhou and Wu, 2017) employees of unspecified seniority level served as informants. A few more studies (8.4 percent) involved environmental or sustainability managers as their responders, however, only two studies relied solely on them (Cormier, Gordon and Magnan, 2004; Todaro *et al.*, 2019). The rest of the primary data studies (14.3 percent) incorporate the CEO and the BoD in their response sample. The majority of the primary data studies (65.5 percent) relied on one type of responder, while the rest used responders from multiple levels and specialities.

Concerning secondary data collection sources, publicly available databases, mainly the Worldbank, (Symeou, Zyglidopoulos and Williamson, 2018; Montalbano and Nenci, 2019)

accounted for 18.5 percent, followed by corporate sustainability annual reports with 8.4 percent. There is a sharp increase in studies using Thomson Reuters Eikon in the last chronological period in terms of commercial databases. Other databases used for environmental data included Newsweeks (e.g., Aigbedo, 2019; Ardito and Dangelico, 2018), Sustainalytics (e.g., Auer, 2018) and Bloomberg ESG Data (e.g., Delgado-Márquez and Pedauga, 2017). Financial data in studies relying on secondary data were mainly drawn from Compustat (e.g., Leyva-de la Hiz, Hurtado-Torres, and Bermúdez-Edo, 2019; Sadovnikova and Pujari, 2017) or firms own annual financial reports.

More than two-thirds of the studies embarked on regression techniques to analyse their data followed by 18.5 percent using Structure Equation Modelling, 5 percent Content Analysis and the rest 7.6 percent miscellaneous techniques such as ANOVA, MANCOVA for the comparison of continues response variables (e.g., Chan, 2013; First and Khetriwal, 2010; Wiengarten, Pagell, and Fynes, 2013). Approximately half of the studies undertaken reliability tests of the data used. In a similar trend slightly over half of the studies embarked on validity procedures while 61.2 percent employed a response bias test when applicable. The overwhelming majority of the studies did not perform any robustness test of the results. Studies performing a robustness test used alternative control variables to check if the results are robust to those changes. Finally, more than three-quarters of the studies failed to report any endogeneity test, which indicates the chronic concerns raised by researchers regarding causality issues in corporate sustainability research.

Table 4.3: Manuscript features review results

	Total N=118 % (1d.p)	2001-2007 N1=11	2008-2013 N2=30	2014-2019 N3=77
Nature of Article				
Quantitative	95.8	100.0	96.7	94.8
Qualitative	2.5	0.0	3.3	2.6
Mixed	1.7	0.0	0.0	2.6
Time Dimension				
Cross-Sectional	80.5	90.9	96.7	72.7
Longitudinal	19.5	9.1	3.3	27.3
Sample Size				
Up to 99	15.3	27.3	16.7	13.0
100-249	35.6	36.4	33.3	36.4

250-499	20.3	18.2	23.3	19.5
500 And More	28.8	18.2	26.7	31.2
Data Collection				
Primary	47.5	63.6	46.7	45.5
Secondary	49.2	36.4	46.7	51.9
Mixed	3.4	0.0	6.7	2.6
*Data Source**				
Survey	49.6	63.6	53.3	46.2
Interview	11.8	9.1	20.0	9.0
Sustainability/Annual Reports	8.4	9.1	6.7	9.0
Thomson Reuters (Asset 4-Eikon/ DataStream)	13.4	0.0	3.3	19.2
KLD	2.5	0.0	3.3	2.6
Websites/ Advertisements	4.2	9.1	13.3	0.0
Other Government Databases	18.5	9.1	10.0	23.1
Other Commercial Databases	13.4	9.1	13.3	14.1
*Key Informant**				
CEO/Director	14.3	18.2	3.3	17.9
General Managers	36.1	45.5	36.7	34.6
Marketing Managers	2.5	0.0	0.0	3.8
Environmental Manager	8.4	18.2	6.7	7.7
Employees	3.4	9.1	0.0	3.8
Consumers	0.8	0.0	3.3	0.0
Not Applicable / Secondary Data	47.1	36.4	43.3	50.0
Not Specified	6.7	0.0	16.7	3.7
Response Rate				
19% or Less	9.3	0.0	10.0	10.4
20-29%	13.6	36.4	13.3	10.4
30-39%	6.8	18.2	3.3	6.5
40% 0r More	12.7	18.2	10.0	13.0
Not Specified	2.5	0.0	6.7	1.3
Not Applicable	55.1	27.3	56.7	58.4
*Statistical Analysis **				
Regression	69.5	81.8	63.3	70.1
Content Analysis	5.1	9.1	3.3	5.2
SEM	18.6	9.1	13.3	22.1
Miscellaneous	7.6	0.0	20.0	3.9
Statistical Tests				
Reliability				
Yes	52.5	36.4	63.3	50.6
No	47.5	63.6	36.7	49.4
Validity				
Yes	53.4	45.5	56.7	53.2
No	46.6	54.5	43.3	46.8
Sample/ Response Bias				
Yes	39.5	27.3	43.3	39.7
No	24.4	45.5	30.0	19.2
Not Applicable	36.1	27.3	26.7	41.0

Robustness				
Yes	28.0	18.2	10.0	36.4
No	72.0	81.8	90.0	63.6
Endogeneity				
Yes	21.0	18.2	13.3	24.4
No	76.5	72.7	83.3	74.4
Not Applicable	2.5	9.1	3.3	1.3

4.3 Theoretical Assessment

In this section, the theoretical framework or instrument employed in the studies is assessed. A plethora of studies lacked explicit theoretical support, 41.1 percent in particular. The remaining of the articles used mainly one theory (35.3 percent), two theories (17.6 percent) and few studies (5 percent), more recently, relied on a combination of at least three theories. In total, the articles were based upon at least one of the 23 distinct theories including Institutional theory (21 percent), Resource-based View (14.3 percent) and its sibling theories (5 percent), Stakeholder theory (11.8 percent), Contingency theory 5.9 (percent), Legitimacy theory (5 percent), Natural Resource-based View (3.4 percent), Pollution haven/halo hypothesis theory (3.4 percent), Resource dependence theory (2.5 percent), Transaction Cost Economics (1.7 percent). Other theories such as Ability-Motivation-Opportunity, Strategic network, Social network, Strategic choice, Ecological modernization, Social exchange, Environmental spillovers, Industrial organization, Social movement and Institutional change theories were used not more than once. It is worth mentioning that the diversity of theories used is increased over time. A particular shift from stakeholder theory toward institutional theory from 2008 onwards was observed, mainly used in conjunction with the RBV as a bundle of theoretical instruments.

Table 4.4: Theoretical Assessment Review Results

	Total N=118 % (1d.p)	2001-2007 N1=11	2008-2013 N2=30	2014-2019 N3=77
Number of Paradigms/Theories				
One	35.6	27.3	43.3	33.8
Two	17.8	18.2	13.3	19.5
Three or More	5.1	0.0	0.0	7.8
None	41.5	54.5	43.3	39.0
Paradigms/Theories Used				
Institutional Theory	21.2	0.0	26.7	22.1

Resource-Based View	14.4	0.0	16.7	15.6
Dynamic Capabilities	3.4	0.0	0.0	5.1
Resource Advantage Theory	0.0	0.0	0.0	0.0
Slack Resources	0.8	0.0	0.0	1.3
Contingent RBV	0.8	0.0	0.0	1.3
Stakeholder Theory	11.8	18.2	10.0	11.5
Contingency Theory	5.9	0.0	0.0	9.0
Legitimacy Theory	5.0	9.1	3.3	5.1
Natural Resource-based View	3.4	9.1	3.3	2.6
Pollution Haven/Halo Hypothesis Theories	3.4	9.1	0.0	3.8
Resource Dependence Theory	2.5	9.1	0.0	2.6
Transaction Cost Economics	1.7	0.0	0.0	2.6
Miscellaneous	11.8	9.1	10.0	12.8
No Theory	40.7	54.5	43.3	37.7

Institutional theory suggests that organizations' actions and environmental behaviour are shaped by their institutional environment in their endeavour toward conformity with prominent norms and traditions (Aguilera-Caracuel et al., 2012). The extent to which a firm achieve conformity to these norms defines its performance (Handelman and Arnold, 1999). A central proposition of the theory lies in the assumption that organizations operating under similar social frameworks behave similarly to achieve societal approval. In the context of multinational firms where the firm's activities are crossing national boundaries, institutionalism can lead to heterogeneity in firms environmental actions as the pressures from institutional actors vary across nations (Christmann, 2004).

In the same vein, researchers found difficulties in interpreting the heterogeneity in firms operating in different industries under the same institutions. Thus, a body of literature refers to the neo-institutional evolution of the theory aiming to account for institutional changes and particular attributes of organizations that could enable a different performance outcome for companies under the same institutional pressures. The institutional theory was the most commonly employed in the MNEs environmental strategy context, and it was primarily used to gain insights into the effect of institutional distance (Aguilera-Caracuel *et al.*, 2012; Todaro *et al.*, 2019), government intervention (Joo, Seo and Min, 2018), industry institutions (Pagell, Wiengarten and Fynes, 2013) coercive, normative, mimetic pressures (Zhu and Geng, 2013), home and host countries regulatory frameworks (Darnall, Henriques and Sadorsky, 2008; Pagell, Wiengarten and Fynes, 2013) and socio-cultural pressures (Daddi *et al.*, 2016; Marquis, Toffel and Zhou, 2016; Kawai, Strange and Zucchella, 2018).

The second prominent theory used in the review was the Resource-based View of the firm. The theory was initially introduced in a business context by Barney (1991) emphasizing the role of rare, valuable, inimitable, and non-substitutable resources and capabilities in achieving a firm's competitive advantage within the role of an organization's strategy (Leonidas C Leonidou *et al.*, 2015). Resources can be categorized as tangible and intangible assets of a firm, such as physical equipment, raw materials financial reserves and on the other hand corporate culture reputation and intellectual capital (Grant, 1991). The capabilities of a firm are the skills developed to capture and manage those resources. In the context of corporate environmental research, those resources and capabilities are the antecedents sourced internally in the firm which drives environmental strategies (L. C. Leonidou et al., 2015; López-Gamero et al., 2016). It is noteworthy that 63 percent of the studies that used RBV as a theoretical background combined it with other theoretical paradigms such as institutional and stakeholder theories. Although RBV can suitably explain the individual attributes and characteristics developed within an organization in terms of its resources and capabilities, it fails to account for factors influencing its operating environment.

Additional work has been done on the derivatives or distinct elements of the RBV theory such as 1) Dynamic Capabilities 2) Slack Resources 3) Contingent Resource-based View and the 4) Resource Advantage theories. The Dynamic capabilities paradigm accounts for the dynamic nature of some capabilities to evolve and transform tangible and intangible resources into a competitive advantage in rapidly changing environments (Eisenhardt and Martin, 2000). Slack resources theory refers to excess organizational resources, immediately available for the organization to be used, and their role in firm performance and survival (George, 2005; Paeleman and Vanacker, 2015).

Finally, another variation of the theory is the resource advantage theory which pins the importance of sound resource management (Richey Jr *et al.*, 2014) holding that firms must leverage their resources on a market-oriented way to gain a competitive advantage in the marketplace (Hunt and Morgan, 1996). The Natural Resource-based View of the firm (Hart, 1995) is an extension of the firm's Resource-based View, initially introduced by Barney (1991) to an environmental context. According to this theory, incorporating the natural environment into strategic management can be conceptualized in the following three interrelated strategies: (a) Product stewardship. (b) Pollution abatement (c) Sustainable development. The NRBV can stand as a sole theoretical background to explain how integrating natural environment concerns

into resource allocation can generate proactive, dynamic capabilities and environmental strategies that can lead to a sustainable competitive advantage and superior performance (Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010). The theory is used to explore how proactive environmental strategies positively influence the export intensity of SMEs (Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010) and examine whether firms specific organisational resources and capabilities will lead to an increased environmental and financial performance (Chan, 2005). Recently, Jin et al. (2019) used the theory to examine the effects of environmental technology innovation behaviour and environmental management innovation behaviour of foreign direct investment enterprises on environmental performance. The theory of NRBV is used in the two empirical studies of this thesis to explain how certain resources and capabilities in hospitality firms can trigger different environmental strategies that could influence their performance.

Moving forward a total of 11.8 percent of the studies use stakeholder theory to explain the relationship between firms and the groups and individuals who can affect or are affected by that. The stakeholder theory states that corporations should manage their relationship with individuals or groups with interest in the organization proactively to gain a sustainable competitive advantage. A stakeholder can be defined as a group or individual with a particular interest in an organization and capacity to affect or be affected by this organization's actions (Freeman and Medoff, 1984). The better a firm manages its relationship with its various stakeholders; the better performance outcomes will achieve (Darnall, Henriques and Sadorsky, 2010). Concerns toward the environment affect a wide variety of stakeholders which in turn affect an organization's environmental strategy, therefore, increasing their environmental performance (Jose and Lee, 2007). The theory was primarily used to examine how internal and external stakeholder environmental pressures can facilitate the adaptation of eco-friendly strategies (e.g. Cormier et al., 2004; González-Benito et al., 2011; Pucheta-Martínez and Gallego-Álvarez, 2018). Other aspects examined under the stakeholder theory are the effects of increased stakeholder pressures on organizations' greenwashing practices (Marquis, Toffel and Zhou, 2016; Testa, Boiral and Iraldo, 2018). While stakeholder theory posits various stakeholders' existence as different actors with distinguished interests and influences at a company, legitimacy theory treats society as a whole and pays particular attention to the firm's social acceptance aspects (Gallego-Álvarez, Rodríguez-Domínguez and García-Sánchez, 2011). Legitimacy issues are profound in MNEs because of the liability of foreignness challenges they face. The adoption of environmental strategies and their disclosure will

comfort stakeholder concerns toward the environment and shore up the firm's credibility and legitimacy towards its stakeholders.

A notable amount of studies draw upon the contingency theory positing that for a strategy to be effective needs to fit its business environment (Bruns and Stalker, 1961) and that organization performance depends upon its ability to adapt to the operating conditions (Aragón-Correa and Sharma, 2003). The nature of MNEs activities operating in different environment settings offers the ideal ground to apply the positioning that the effect of an antecedent can differ depending on the context as sourced from the contingency theory. Studies used contingent factors on linking various antecedents with environmental management practices (Sancha, Wong and Thomsen, 2016; Tsai and Liao, 2017; Niemann, Dickel and Eckardt, 2019) and the role of strategic fit on strategy adaptation standardization environmental practices (Zeriti *et al.*, 2014).

Studies exploring the phenomenon of enterprises relocating part of their activities in foreign countries relied either on the 'pollution haven' or 'pollution halo' hypothesis depending on the effect of such practices on the host country natural environment. Specifically, 'pollution haven' theory argues that foreign investors originated from industrial countries with stringent environmental regulation frameworks are relocating their polluting activities to developing countries to benefit from lesser environmental regulations(Jin *et al.*, 2019). Contrary, the 'pollution halo' hypothesis supports that foreign enterprises tend to transfer their environmental, technological advancements into the host country contributing to reduced carbon emissions and improving their natural environment (Zhang and Zhou, 2016). The theory was used to explain firms offshoring decisions in regards to their entry mode, regulatory frameworks of home and host countries (Antonietti, De Marchi and Di Maria, 2017; Jin *et al.*, 2019) and the determinants of the proactive and reactive environmental management strategies of MNEs (Christmann and Taylor, 2001).

4.4 Thematic Analysis of the Literature

Table 4.5 provides an overview of the key thematic areas researched by corporate environmental sustainability research of firms with an international presence. To synthesise the topics examined of the selected articles and map the corporate environmental sustainability international literature, I applied the 'Antecedents-Phenomenon- Consequences' logic (see

Narayanan, Zane and Kemmerer, 2011; Pisani and Ricart, 2016; McWilliam *et al.*, 2019; Hutzschenreuter, Matt and Kleindienst, 2020). The ‘Antecedents’ category includes topics

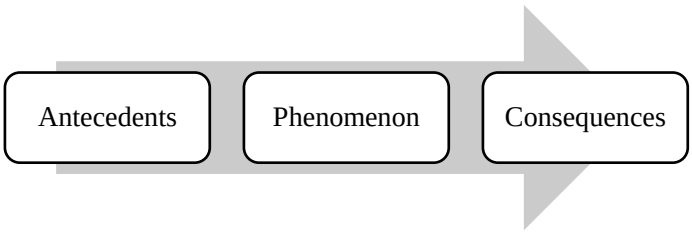

Figure 4.2: Showing the Antecedents-Outcome logic

coving the main drivers that can trigger the emergence and growth of environmental strategies followed by firms. The ‘Phenomenon category consists of topics that examine different types and aspects of corporate environmental strategies and their distinctive elements. Finally, the ‘Consequences’ category covers topics associated with the main effects of firms following environmental strategies. These were classified into eleven broad categories (Table 4.5).

As expected, the focus on environmental strategies received the greatest attention from researchers. The capabilities conducive to the firm’s strategies were the main antecedents examined (23.7 percent) while the macro environment received more attention than the micro and meso environment the firm is operating. The firms' performance outcomes were intensively examined with 55.1 percent of the attention mainly on financial performance outcomes. Topics such as organizational complexity and competitive advantage received moderate attention, 11.9 and 11 percent respectively, while approaches to eco-friendly strategies were rarely tackled.

4.4.1 Macro-determinants of eco-strategies

The first category refers to macro-determinants of eco-strategies. The most frequently examined element found to be the regulatory forces affecting the firm’s adaptation of eco-friendly strategies focusing on home and host country regulatory factors and coercive pressures affecting a firm’s decisions. The majority of the studies focus on the country's environmental regulation strictness where some studies use the overall regulatory framework as a proxy of the regulatory forces exerted on the firm. Additional studies examined institutional factors including the environmental, institutional distance between home and host country or generic institutional pressures exerted by the firm's institutions. Firms operating in foreign environments have to cope with different country institutional profiles and need to gain

legitimacy in all the jurisdictions they operate, including aspects related to the environment (Aguilera-Caracuel et al., 2012).

4.4.2 Meso-determinants of eco-strategies

The meso-environment of a firm concerns factors that multinational firms cannot respond to directly or indirectly referring to industrial particularities. Industry pressures vary across the type of industry (for example, Sotorrío and Sánchez, 2010) and its effect on multinational companies' strategic environmental approach (Christmann, 2004). The majority of the studies (66.6 percent) concerning meso-environmental factors examined environmental management standards either through the accreditation from the International Organization of Standardization, such as the ISO 14000 environmental specified standards (for e.g. Bellesi et al., 2005; Casadesús et al., 2008; Kang and He, 2018; Wiengarten et al., 2013), or generic quality management (Wagner, 2008) systems such as the ISO 9000 family (Darnall, Henriques and Sadorsky, 2008). Besides the implementation of relevant certification systems, researchers have also examined the role of monitoring performance and verifying targets (Epstein and Roy, 2007; Hsieh, 2012; Testa, Boiral and Iraldo, 2018). The second category refers directly to the differences between firms based on the environmental characteristics of their industry. Those can be examined based on the type of industry (Wagner, 2008; Sotorrío and Sánchez, 2010; Kolk and Fortanier, 2013; Baral and Pokharel, 2017; Corrocher and Solito, 2017), the industrial pressures exerted on firms by industrial associations (Christmann, 2004; Testa, Boiral and Iraldo, 2018) and recently using industry-specific pollution intensity metrics (Sadovnikova and Pujari, 2017; Banerjee, Gupta and Mudalige, 2019).

4.4.3 Micro-Determinants of eco-strategies

Subsequently, micro-environmental forces refer to factors that are affecting the organization directly. In the multinational firm's environmental strategies literature, five streams of research are identified. The majority of the studies (14.2 percent) focused on the effect of customer characteristics on shaping an eco-friendly strategy. Those could be specified as "home country" and "host country" consumers (e.g. Achabou et al., 2017; Qi et al., 2011; Wu, 2015) or as unity concept (e.g., Christmann and Taylor, 2001; Dam and Petkova, 2014; Zeriti et al., 2014; Zhu and Geng, 2013). The extant research focused on competitive pressures referring to competitive intensity, and mimetic pressures exerted on the firm. The competitive intensity

was defined as the number of competitors in the market and future opportunities for growth and was used in the examined studies (8.8 percent) to estimate the effect of competitive pressures as an antecedent of adopting eco-friendly strategies (R. Y. K. Chan et al., 2012; L. C. Leonidou et al., 2015; L. C. Leonidou et al., 2013; Tatoglu et al., 2014; Wagner, 2008, 2015). Similarly Daddi et al., (2016) and Zhu and Geng, (2013) referred to mimetic pressures as a driver for firms to imitate their competitors' green practices. Furthermore, the market characteristics were examined in existing research (for e.g., Darnall et al., 2008; Kawai et al., 2018). Researchers considered individual characteristics such as munificence, complexity, and uncertainty (Martin-Tapia, Aragon-Correa and Senise-Barrio, 2008; Galeazzo, Furlan and Vinelli, 2014b; Wagner, 2015; Sancha, Wong and Thomsen, 2016; Sinnandavar, Wong and Soh, 2018).

Recent studies have also examined the organizational capabilities and resources affecting environmental collaborations with suppliers and its effects on green practices such as supply chain management or environmental performance (Bae and Hull, 2018; Yu *et al.*, 2020). Dam and Petkova (2014) and Sadovnikova and Pujari (2017) examined whether such commitment is rewarded or punished by financial markets, indicating the positive effects of green technology partnerships on carrying out environmental practices and generate gains. The results indicate that purchasers' pressure influences the implementation of training operational and monitoring actions through the adoption of environmental accreditations and certificates (Li, Zhou and Wu, 2017; Testa, Boiral and Iraldo, 2018). Finally, scarce research examined the influence of shareholders (Qi *et al.*, 2011; Testa, Boiral and Iraldo, 2018) and ownership on environmental practices indicating their positive association (Darnall, Henriques and Sadorsky, 2008).

4.4.4 Organizational resources conducive to the environmental strategy

Research on organizational resources conducive to the environmental strategy was the second most popular broad area examined. A stream of research examined resources as a singular facilitator of environmental practices (Epstein and Roy, 2007; Sotorrío and Sánchez, 2010; Delgado-Márquez and Pedauga, 2017) while Zhu and Geng, (2013) examined the lack of resources as a barrier in adopting eco-friendly practices. Researchers classified resources into tangible/ physical and intangible assets to examine their prominent role in facilitating an MNEs green strategy. Research has repeatedly stressed the crucial role of physical resources on

helping firms transcend their eco-friendly strategy outside their national boundaries (Cole et al., 2006; L. C. Leonidou et al., 2013).

Further research examined particular resources with green human resources having a prominent role. A part of the research dealt with factors motivating and influencing employees in engaging with environmental activities while the rest examined how green human resource management affects firm green strategy. Yu et al. (2020) indicate the importance of Green Human Resource Management (GHRM) bundle practices on forming environmental cooperation with customers and suppliers while Miras-Rodríguez et al. (2018) indicate employees support as the main driver of environmental practices in relation-based rather than rule-based country governance systems. Green human resources also found to positively moderate the relationship between green business strategy and financial performance (Theoharakis, Bicakcioglu and Tanyeri, 2019). Finally, Cole et al. (2006) found that younger employees are more environmentally aware and prone to implement environmental policies and practices.

A 5.4 percent of the articles examined the role of environment-related training and skills developed within MNEs as green strategy facilitators (Ramus, 2002; Albornoz *et al.*, 2014; Misani and Pogutz, 2015; Shah, 2015; Testa, Boiral and Iraldo, 2018; Montalbano and Nenci, 2019) or the appointment of an environmental manager or board appointment with focus on sustainability. Moreover, the effect of financial resource availability was examined in terms of a) environment-related investment (Cole, Elliott and Shimamoto, 2006; Pagell, Wiengarten and Fynes, 2013), b) credit availability from bank institutions (Mengze and Wei, 2015; Bıçakcıoğlu, 2018) c) and the form of financial constraints of firms (Cormier, Gordon and Magnan, 2004; Banerjee, Gupta and Mudalige, 2019).

4.4.5 Organizational capabilities conducive to the firm's environmental strategy

Organizational capabilities conducive to firm's environmental strategy were examined by 23.7 percent of the articles. A fraction of 4.2 percent of all the studies examined organizational capabilities as a general term in their role as facilitators of eco-friendly strategies (Chan, 2005; Li and Zhou, 2017; Bıçakcıoğlu, 2018). Contrary, Bu and Wagner (2016) and Zhu and Geng (2013) examined the lack of capabilities as a barrier for companies adopting environmental practices. The primary emphasis was on the capabilities of a strategic nature with 10.2 percent

of the studies incorporating a strategic nature capability in their analysis. Strategic capabilities received the research community's attention on the second (2008-2013) and third (2014-2019) thematic periods. Three types of strategic capabilities used in prior research were identified, namely a) integration capabilities b) shared vision and c) international growth capability.

Research (Narasimhan and Schoenherr, 2012; Sinnandavar, Wong and Soh, 2018) focused on supply chain integration and (Liu *et al.*, 2018) differentiated supply chain integration capability into internal and external. The former looked into cross-functional collaboration within the firm and the latter to establish close ties and partnerships with customers and suppliers. E. L. Li et al. (2017) and Sinnandavar et al. (2018) additionally identify knowledge and operational integration while S. Liu et al. (2012) attempt a different categorization based on people, planning, process, product, project and promotion based integration. Shared vision was examined as a source of strategic capability by 1.7 percent in the context of global hotel chains and export companies on adopting an eco-friendly marketing strategy (for e.g. L. C. Leonidou et al., 2013; L. C. Leonidou et al., 2015). Finally, (Darnall, Henriques and Sadorsky, 2008) examined the role of 'export orientation', described as the experience and knowledge organizations gain when they operate through multiple jurisdictions, as an overall international capability in assisting on the adoption of comprehensive environmental management systems.

Following on, the environmental orientation of MNEs (e.g., Ardito and Dangelico, 2018; Bae and Hull, 2018; Jiang et al., 2018; Leonidou, Fotiadis et al., 2015; Theoharakis et al., 2019) was examined by 7.6 percent of the articles. Environmental orientation was defined as the green culture embedded within organizations (5.1 percent), and in some cases, it was distinguished as internal and external environmental orientation (e.g., R. Y. K. Chan, 2010; R. Y. K. Chan et al., 2012; R. Y. K. Chan and Ma, 2016).

An additional type of capabilities examined (6.8 percent) referred to knowledge-based capabilities, namely 1) Organizational learning, 2) Absorptive capacity 3) Technology sensing and response. Organizational learning capability was examined under the lens of its role in achieving environmental collaboration in export firms (Bae and Hull, 2018) and within the context of MNE achieving an eco-based competitive advantage (L. C. Leonidou et al., 2015). In a similar context (Albornoz *et al.*, 2014) examined the role of the ability of firms to learn, identified as 'absorptive capacity' on adopting environmental practices. Moving a step forward

(Riikkinen, Kauppi and Salmi, 2017) examined the different effects of realized and potential absorptive capacity as drivers of sustainability on MNC's purchasing strategy.

Finally, technology sensing and the response was examined as an antecedent of the environmental orientation of export SMEs and MNEs eco-based competitive advantage (R. Y. K. Chan and Ma, 2016; L. C. Leonidou et al., 2015). Recent studies referred to relational (Akhtar et al., 2018; Bıçakcıoğlu, 2018; L. C. Leonidou et al., 2015) and recover capabilities (Shaharudin *et al.*, 2019). Relational capabilities (2.5 percent), expressed as relationship building (L. C. Leonidou et al., 2015) and networking building capabilities (Akhtar *et al.*, 2018), are emerging in the field of capabilities acting as antecedents of eco-friendly strategy in MNEs as they are examined only in the latest chronological period of the review (2014-2019).

4.4.6 Focus of Environmental Strategies

As expected, the vast majority of the articles, involved variables in measuring the focus of the environmental strategy MNEs followed (69.5 percent). Approximately one-third of the articles (31.4 percent) quantified the strategy followed as an overall metric based on different indicators. An 11.9 percent of the studies shift their focus on the measurement of green practices (Narasimhan and Schoenherr, 2012; Wiengarten and Pagell, 2012; Galeazzo, Furlan and Vinelli, 2014a; Macchion *et al.*, 2017; Riikkinen, Kauppi and Salmi, 2017; Miras-Rodríguez, Machuca and Escobar-Pérez, 2018; Testa *et al.*, 2018; Kularatne *et al.*, 2019), actions (Albornoz *et al.*, 2014) and programmes developed by MNEs (Epstein and Roy, 2007).

Another stream of research referred to the adoption of strategies instead of practices (Chan, 2005, 2010; Cole, Elliott and Shimamoto, 2006; Shah, 2015; Amran *et al.*, 2016; Czerny and Letmathe, 2017; Testa, Boiral and Iraldo, 2018; Gangi *et al.*, 2019; Theoharakis, Bicakcioglu and Tanyeri, 2019) with (Jin *et al.*, 2019) focusing on the environmental strategy of MNEs subsidiaries and (Leonidas C Leonidou *et al.*, 2015) focusing on the environmentally friendly strategy of exports firms. More specified sub-topics environmental strategies used referred to the environmental policies adopted (Ramus, 2002; Albino, Balice and Dangelico, 2009; Hsieh, 2012; Peña-Vinces and Delgado-Márquez, 2013) and the objectives/ targets set to be achieved by firms and the initiatives implemented (Hsieh, 2012; Gangi *et al.*, 2019). An additional 4.2 percent focused on proactive environmental strategies, not imposed by law, with P. H. Chen et al., (2016a) and P. H. Chen et al., (2016b) focusing on pollution prevention strategies.

Other studies in this category explore specific dimensions of these environmental practices, mainly concentrating on the scope of the activity used. Marketing as part of the environmental strategy was tackled in 22.9 percent of the articles, mainly dealing with its antecedents and consequences of environmentally oriented marketing strategies (L. C. Leonidou et al., 2013; Rudawska, 2019; Zeriti et al., 2014). A fraction of the articles, examined the marketing strategy firms followed with particular focus on green communication incorporating the effects of informing consumers, the announcement of green partnerships (Sadovnikova and Pujari, 2017) and disclosure of environmental information (Kolk and Fortanier, 2013; Delgado-Márquez and Pedauga, 2017) through media (Jose and Lee, 2007) and advertisements (Leonidou *et al.*, 2014).

Recent developments on literature examined eco-innovation as part of a firm's environmental strategy. The share of studies incorporating innovation as part of a firm's environmental strategy was doubled compared with the first period examined. It is worth mentioning that environmental innovation was also used as a type of capability (Chen, Ong and Hsu, 2016a; Joo, Seo and Min, 2018; Shaharudin *et al.*, 2019; Yu *et al.*, 2020) rather than a form of an eco-friendly strategy. The categorization of environmental innovation strategies varied based on the scope of the articles referring to environmental, technological innovation, environmental products innovation, environmental process innovation were not studied collectively.

Wagner, (2008, 2009) find evidence of environmental management systems association with process innovations, moderated by the interaction of environmental management system implementation with the country location. No evidence for supporting the relationship between product innovation and environmental management systems was found while market research (Environmental RandD) was found as an enabler of product and process innovations. On the same vein, Joo et al., (2018) examined the role of government intervention as an antecedent of technological and environmental innovation and their export performance outcomes.

Moving forward 12.7 percent of the studies focused on the supply chain management strategy of firms (Albino, Balice and Dangelico, 2009; Wiengarten, Pagell and Fynes, 2013; Ortas, Moneva and Álvarez, 2014; Al-Ghwayeen and Abdallah, 2018; Ardito and Dangelico, 2018; Bae and Hull, 2018; Rudawska, 2019; Shaharudin *et al.*, 2019; Yu *et al.*, 2020). Within that context (Zhu, Sarkis and Lai, 2013) distinguished internal and external GSCM practices while (Liu, Kasturiratne and Moizer, 2012) referred to forward (raw materials into new products) and

reverse sustainable supply chain management (reused, recycled, repaired or remanufactured products) to examine the integration of green marketing with sustainable supply chain management. The review identified a 4.2 percent examining the environmental purchasing individually as part of a firm's supply chain. Finally, a small proportion of the articles (5.9 percent) focused on resource efficiency practices in terms of recycling (King and Shaver, 2001; Montabon, Sroufe and Narasimhan, 2007; Wagner, 2008), waste management (Montabon, Sroufe and Narasimhan, 2007; Galeazzo, Furlan and Vinelli, 2014a) or energy efficiency (Zhu and Geng, 2013; Montalbano and Nenci, 2019).

4.4.7 Approaches to Environmental Strategies

Other topics examined, albeit to a lesser extent, referred to the approaches toward MNEs' environmental strategies and organizational complexity. The approaches were examined in terms of the proactive-reactive stance of MNEs toward environmental regulations and in regards to the standardization adaptation of environmental strategies among MNEs outlets. Christmann and Taylor, (2001) examined the determinants of self-regulation of environmental performance for Chinese firms identifying multinational customers, exports to developed countries and multinational ownership as key antecedents. Additionally, Lin and Ho (2016) examined the effects of institutional pressures on ambidexterity and its mediating effects on environmental performance. With regards to environmental standardization Aguilera-Caracuel et al. (2014); Aguilera-Caracuel, Aragón-Correa, et al., (2012); Christmann, (2004) and Ramus, (2002) examined the factors influencing environmental standardization within MNCs, for example, the environmental, institutional distance between headquarters and subsidiaries, headquarters financial performance and its moderating role between eco-based competitive advantage and global financial performance (L. C. Leonidou et al., 2015).

4.4.8 Organizational complexity

The organizational complexity of the sampled studies received attention from 11.9 percent of the studies. Early research focused on organizational size (Cormier, Gordon and Magnan, 2004; Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010) gradually falling from 18.2 to 2.6 percent. It is noteworthy that size is the most widely used control variable among the studies included in the systematic review. Ownership type was initially examined in terms of foreigner ownership with recent studies exploring dependability on host country (Galeazzo,

Furlan and Vinelli, 2014a; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Shah, 2015) and ownership dispersion (Pucheta-Martínez and Gallego-Álvarez, 2018). An emerging sub-topic of organizational design found in the last chronological period examined referred to the board of directors/ CEO characteristics as diversity, independence, compensation and power (Gangi *et al.*, 2019) or their international experience (Amran *et al.*, 2016).

The second topic examined under organizational complexity referred to internationalization features of MNEs with a corresponding 13.7 percent of the total studies increasing its share by 5.6 percent on the last chronological period. This can be attributed to studies examining configuration/ entry mode issues. Testa et al., (2018) and Todaro et al., (2019) examined the internalization of EMS requirements and environmental strategies while Leonidou, Leonidou, et al., (2015) examined the moderating roles of entry mode and market configuration on the relationship of the eco-friendly marketing mix and financial performance. Internationalization was also examined in terms of geographical spread (Epstein and Roy, 2007; Aguilera-Caracuel, Hurtado-Torres and Aragón-Correa, 2012; Kolk and Fortanier, 2013; Pagell, Wiengarten and Fynes, 2013; Wagner, 2015; Chen, Ong and Hsu, 2016a) or experience based on the number of years firms were engaged in international business (Aguilera-Caracuel, Hurtado-Torres and Aragón-Correa, 2012; Shah, 2015).

4.4.9 Eco-Based Competitive Advantage

The number of studies incorporating competitive advantage as an outcome sourced from following eco-friendly strategies is increased over the years. The low-cost advantage was the dominant type examined with 5.9 percent of the total studies. Following on, 4.2 percent of the studies referred to product differentiation advantage and quality competitive advantage. Studies referring to supply chain issues (for e.g., Galeazzo et al., 2014a; Pagell et al., 2013; Wiengarten and Pagell, 2012) focus on delivery (speed), flexibility, low cost and quality competitive advantages. Studies also examined low-cost advantage, and product differentiation advantage as and their effects on financial performance (Bıçakcıoğlu, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) whereas L. C. Leonidou et al. (2015) examined the role of dynamic capabilities on creating an overall eco-based advantage that will lead into superior financial performance in global hotel chains.

4.4.10 Performance Outcomes of Environmental Strategies

Researchers have also examined the economic (42.4 percent) and environmental (28 percent) performance outcomes of environmental strategies. The vast majority of those that examined economic performance used overall financial or economic metrics. Financial metrics employed used accounting measures (Cormier, Gordon and Magnan, 2004; Montabon, Sroufe and Narasimhan, 2007; Aguilera-Caracuel *et al.*, 2012; Dam and Petkova, 2014; Testa *et al.*, 2018) or export performance specific metrics (R. Y. K. Chan and Ma, 2016; L. C. Leonidou et al., 2015; L. C. Leonidou et al., 2013; Martín-Tapia et al., 2010; Shi and Xu, 2018; Zeriti et al., 2014) depending on the nature of the study.

Recent studies examined the effects of environmental strategies on market and financial market performance outcomes. Market performance (Leonidas C Leonidou *et al.*, 2015; Li, Zhou and Wu, 2017; Bıçakcıoğlu, 2018) was also examined under the lenses of a company's green image or reputation (Daddi *et al.*, 2016) as the outcome of institutional pressures or as a determinant of a firm's environmental commitment (Achabou, Dekhili and Hamdoun, 2017). An additional 5.1 percent examined financial market performance either in terms of Tobin's Q as an outcome of greenwashing practices and environmental performance (Misani and Pogutz, 2015; Testa *et al.*, 2018) or stock price reaction on environmental supply chain sustainability programs (Dam and Petkova, 2014). First and Khetriwal, (2010) and Sadovnikova and Pujari (2017) explored the impact of green strategic partnerships and environmental orientation on firm market value. Other subcategories measuring economic performance outcomes referred to operational (5.1 percent) and product-related performance (1.7 percent) metrics.

The third type of topic, examined as an outcome of eco-friendly strategies, referred to environmental performance. The operationalization of environmental performance is a field of dispute in the literature as there is no single indicator or metric. The vast majority of the articles used uniformed measures as a result of eco-friendly strategies or as an antecedent of superior financial performance. On instances (e.g., First and Khetriwal, 2010) even where there is a reference to environmental performance, the variable's operationalisation is done on the policies adopted as part of the firms green strategy. Few studies examined environmental performance dimensions such as Emissions or Resource related performance indicators (Li and Zhou, 2017). The inconsistency on the definition and conceptualization of environmental performance is consistent with difficulties to examine the actual environmental damage or

benefits a company can bring to the environment, especially when it has an international presence. Therefore, a tendency to examine environmental performance as a unified term in the last chronological period is observed, with the risk of losing sight of detailed attributes.

4.4.11 Miscellaneous

Furthermore, some articles investigated issues beyond these aforementioned categories. The primary category was top management environmentalism referring to the environmental concerns or managerial vision of high ranked managers across the firm and how this can shape an eco-friendly strategy (Chen, Ong and Hsu, 2016a; Akhtar *et al.*, 2018; Todaro *et al.*, 2019). Studies on international treaties such as the Kyoto protocol (Gallego-Álvarez, Rodríguez-Domínguez and García-Sánchez, 2011) or UN global compact examined the effects of such treaties on the firm level. Finally, 7.7 percent of the articles relied on stakeholder pressures as an antecedent without specifying particular actors, thus was impossible to fit the thematicization operationalized for the purpose of this review.

Table 4.5: Results of Systematic Review Empirical Findings

	Total N=118 % (1d.p)	2001-2007 N1=11	2008-2013 N2=30	2014-2019 N3=77
Macro Determinants of Eco-Strategy (55)				
Regulatory Forces	21.2	9.1	30.0	19.5
▪ *Regulatory Factors*	19.3	9	25.8	16.7
▪ *Coercive Pressures*	1.7	0	3.2	1.4
Institutional Factors	11.9	0.0	6.7	15.6
▪ *Institutional Pressures*	5.3	0	3.2	6.9
▪ *Environmental Institutional Distance*	2.7	0	3.2	2.8
Socio-Cultural Pressures	19.5	18.2	26.7	16.9
▪ *Social Pressures*	7.1	0	6.5	8.3
▪ *Normative Pressures*	2.7	0	6.5	1.4
▪ *Cultural Pressures*	3.5	0	3.2	4.2
▪ *Public /Media Pressures*	6.2	20	9.7	2.8
Governmental Factors	5.1	9.1	6.7	3.9
▪ *Government Green Incentives*	1.8	0	0	2.8
▪ *Government Pressures*	3.5	10	6.5	1.4
Economic Conditions	2.7	10	3.2	1.4
Technological Conditions	0.9	0	0	1.4
General Country-Level Factors	8.8	10	9.7	8.3
Meso Determinants of Environmental Strategy	19.5	36.4	23.3	15.6
Environmental Management Standards (	13.6	27.3	26.7	6.5

▪ *Environmental Management Systems*	8	10	12.9	5.6
▪ *Environmental Management Standards*	8	20	16.1	2.8
▪ *Quality Management Systems*	2.7	10	6.5	0
▪ *Monitoring/Performance Evaluation Systems*	3.5	10	3.2	2.8
Industry Standards	7.6	18.2	6.7	6.5
▪ *Industry Pressures*	3.5	10	3.2	2.8
▪ *Industry Type*	4.4	0	9.7	2.8
▪ *Industry Pollution Intensity*	1.8	0	0	2.8
Micro Determinants of Environmental Strategy				
Customer Pressures	14.2	10	12.9	15.3
Competitive Pressures	7.6	9.1	10.0	6.5
▪ *Competitive Intensity*	8.8	0	12.9	8.3
▪ *Mimetic Pressures*	1.8	0	3.2	1.4
Supplier Influences				
▪ *Influence of Suppliers on Environmental Practices*	1.8	0	0	2.8
▪ *Environmental Collaboration*	5.3	0	0	8.3
Owner/Shareholder Pressures				
▪ *Influence of Shareholders / Investors on Environmental Practices*	2.7	0	3.2	2.8
▪ *Ownership Pressures*	0.9	0	3.2	0
Market Characteristics	8.5	18.2	6.7	7.8
▪ *Uncertainty*	2.7	0	6.5	1.4
▪ *Complexity*	3.5	0	3.2	4.2
▪ *Market pressures*	0.9	0	0	1.4
▪ *Munificence*	2.7	0	3.2	2.8
Organizational Resources Conductive to Environmental Strategy				
General Resource Commitment	8.5	9.1	13.3	6.5
Physical Resource Commitment				
▪ *Physical Resources/Tabglible*	2.7	0	3.2	2.8
▪ *Physical Capital Intensity*	4.4	20	6.5	1.4
Human Resource Commitment				
▪ *Employee Commitment*	3.5	10	6.5	1.4
▪ *Human Capital Intensity*	0.9	10	0	0
▪ *Green Human Resource Management*	3.5	0	0	5.6
Financial Resource Availability				
▪ *Environmental Banking Finance*	1.8	0	0	2.8
▪ *Financial Constraints of Firms*	2.7	10	0	2.8
▪ *Environmental Investments*	1.8	10	3.2	0
Environmental Training/Skills				
▪ *Employee Environmental Training*	1.8	10	0	1.4
▪ *Skills*	0.9	0	0	1.4
▪ *Environmental Manager/ Board Appointment*	2.7	0	3.2	2.8
Organizational Capabilities Conductive to Environmental Strategy				
Organizational Capabilities	4.2	9.1	3.3	3.9
Strategic Capabilities	10.2	0	16.7	9.1
▪ *Strategic Capability*	0.8	0	0	1.3
▪ *Shared Vision*	1.7	0	3.3	1.3

▪ *Integration Capability*	8.5	0	13.3	7.8
Environmental Orientation	7.6	0	6.7	9.1
▪ *Environmental Orientation/ Green culture*	5.1	0	3.3	6.5
▪ *External Environmental Orientation*	2.5	0	6.7	1.3
▪ *Internal Environmental Orientation*	2.5	0	6.7	1.3
Knowledge Based Capabilities	6.8	0	6.7	2.6
• Knowledge Based Capabilities	0.8	0	0	1.3
• Absorptive Capacity	1.7	0	0	2.6
• Organizational learning	2.5	0	3.3	2.6
• Technology Sensing and Response	2.5	0	3.3	2.6
Relational Capabilities	2.5	0	0	3
▪ *Relational Capabilities*	0.8	0	0	1.3
▪ *Relationship Building*	0.8	0	0	1.3
▪ *Relationship Based Business Networks*	1.7	0	0	2.6
Recover Capabilities	0.8	0	0	1.3
Focus of Environmental Strategies				
Overall Environmental Strategy	31.4	36.4	33.3	29.9
▪ *Environmental Business Strategy*	21.2	36.4	23.3	18.2
▪ *Green Practices*	11.9	9.1	10.0	11.9
Eco-Friendly Marketing Mix	22.9	36.4	33.3	16.9
▪ *Environmental Marketing Strategy*	7.6	9.1	13.3	5.2
▪ *Green Communication*	16.1	27.3	20.0	13.0
Eco-Product Innovation	16.9	9.1	16.7	18.2
▪ *Environmental Innovation*	9.3	9.1	0.0	13.0
▪ *Environmental Product Design*	1.7	0.0	0.0	2.6
▪ *Environmental RandD*	1.7	0.0	0.0	2.6
▪ *Product Innovation*	1.7	0.0	0.0	1.3
Green Supply Chain Management	12.7	9.1	20	11.7
▪ *Environmental Purchasing*	4.2	9.1	6.7	2.6
▪ *Green Supply Chain Management*	9.3	0.0	13.3	9.1
Resource Efficiency	5.9	18.2	10.0	2.6
▪ *Waste Management*	1.7	9.1	0.0	1.3
▪ *Recycling*	2.5	18.2	3.3	0.0
▪ *Energy Efficiency*	2.5	0.0	6.7	1.3
Approaches to Environmental Strategies				
Proactive/Reactive Environmental Strategies	6.8	9.1	0	1.3
Eco-Strategy Standardization/Adaptation	5.1	18.2	3.3	3.9
Organizational Complexity				
Organizational Design	11.9	45.5	3.3	10.4
▪ *Organization Size*	4.2	27.3	0.0	2.6
▪ *Ownership Type*	7.6	18.2	3.3	7.8
▪ *Top Management Characteristics*	11.9	36.4	6.7	10.4
Internationalization	13.6	9.1	10.0	15.6
▪ *International Experience*	1.7	0.0	3.3	1.3
▪ *International Diversification*	9.3	9.1	10.0	9.1
▪ *Configuration/ Entry mode type*	3.4	0.0	0.0	5.2
Eco-Based Competitive Advantage				
Low Cost Advantage	5.9	0.0	6.7	6.5
Product Differentiation Advantage	4.2	0.0	0.0	6.5

▪ *Product Differentiation Competitive Advantage*	1.7	0.0	0.0	2.6
▪ *Differentiation Competitive Advantage*	1.7	0.0	0.0	2.6
▪ *Product Stewardship*	0.8	0.0	0.0	1.3
Quality Competitive Advantage	4.2	0.0	10.0	2.6
Delivery Advantage	3.4	9.1	6.7	1.3
Flexibility Advantage	2.5	0.0	6.7	1.3
General Eco-Based Advantage	0.8	0.0	0.0	1.3
Performance Outcomes of Environmental Strategies				
Economic Performance	41.5	45.5	33.3	44.2
Overall Economic Performance	9.3	0.0	16.7	7.8
Financial Performance	25.4	45.5	13.3	27.3
Market Performance	4.2	0.0	0.0	6.5
▪ Market Performance	2.5	0.0	0.0	3.9
▪ *Company's Green Image/ Reputation*	1.7	0.0	0.0	2.6
Financial Market Performance	4.2	0.0	3.3	5.2
▪ *Financial Market Performance*	2.5	0.0	0.0	3.9
▪ *Corporate Brand Value*	1.7	0.0	3.3	1.3
Operational Performance	5.1	9.1	3.3	5.2
▪ *Operational Efficiency*	1.7	0.0	3.3	1.3
▪ *Productivity-Related Performance Measures*	3.4	9.1	0.0	3.9
▪ *Product- Related Performance*	1.7	0.0	0.0	2.6
Environmental Performance	28.0	27.3	16.7	32.5
▪ *Overall Environmental performance*	16.9	9.1	10.0	20.8
▪ *Resource Related*	3.4	18.2	0.0	1.3
▪ *Emissions/Pollution Related*	5.9	9.1	0.0	7.8
Miscellaneous				
Prior Green Performance				
▪ *Firm's Prior Negative Green Performance*	0.9	0	0	1.4
▪ *Firm's Prior Positive Green Performance*	0.9	0	0	1.4
Life Cycle Analysis	2.7	10	3.2	1.4
Top Management Environmentalism				
▪ *Managerial Vision*	1.8	10	0	1.4
▪ *Environmental Concerns*	5.3	0	0	8.3
International Treaties	1.8	0	3.2	1.4
Generic Stakeholder Pressures	7.6	9.1	6.7	7.8

4.5 Directions for Future Research Sourced from Existing Literature

The study reviewed the content of the proposed future directions of the studies published in the last five years (68 papers), intending to shed light on the focal points for future research and un(der) researched topics in international environmental sustainability research. The future directions suggested by the reviewed studies were summarized in Table 4.6. The suggested future research directions were clustered within two major subjects: (A) Research theme

Related and (B) Method Related. Within each of the subjects, the contents of future research are further categorized into various directions, depending on whether those suggestions of future research are allied with the development of existing framework (A1) or new topics (A2), or if they are related to the research context, research design (B1 and B2), as well as the refinement of variable measurement (B3). The proposed research topics are presented in the subsequent column in Table 4.6.

4.5.1 Research theme

4.5.1.1 ***Development of existing frameworks and suggestions of new variables***

Starting with the research theme, numerous studies have urged for further development of existing frameworks (A1), through either incorporating new variables or examining the potential effect of moderating/mediating variables on existing frameworks. The second category referred to the proposal of new topics for future research.

4.5.1.1.1 Internal determinants of companies' environmentally friendly strategy

Among the studies advising integrating new variables into research models, some stress the role of internal determinants, including the effect of an organization's culture characteristics (Joo, Seo and Min, 2018; Kang and He, 2018; Testa *et al.*, 2018), corporate governance area (Leonidas C Leonidou *et al.*, 2015; Akhtar *et al.*, 2018; Kang and He, 2018; Pucheta-Martínez and Gallego-Álvarez, 2018; Testa, Boiral and Iraldo, 2018; Rudawska, 2019; Yu *et al.*, 2020), leadership and top management characteristics (Li, Zhou and Wu, 2017; Akhtar *et al.*, 2018; Testa, Boiral and Iraldo, 2018), ownership (Martínez-Ferrero and Frías-Aceituno, 2015; Jin *et al.*, 2019), environmental certifications and auditing bodies (Martínez-Ferrero and Frías-Aceituno, 2015; Daddi *et al.*, 2016; Shaharudin *et al.*, 2019), specific resources and capabilities (Macchion *et al.*, 2017; Kang and He, 2018; Testa *et al.*, 2018; Yu *et al.*, 2020), and international strategies ((Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Macchion *et al.*, 2017) on the adoption and implementation of an eco-friendly strategy in MNEs.

Organization Culture

Regarding organization culture, the un(der)researched variables include a) the internal dynamics such as organization culture (Testa *et al.*, 2018); b) organizational marketing culture (Rudawska, 2019) determinants of an environmentally friendly business strategy; (Kang and He, 2018); c) the role of organizational culture on the relationship between environmental collaboration and environmental performance (Joo, Seo and Min, 2018) and d) firm's environmental commitment (Shaharudin *et al.*, 2019).

Corporate Governance

To explore variables related to corporate governance, the topics that worth more attention include: the managerial (e.g., personality) characteristics (Leonidas C Leonidou *et al.*, 2015) and how the external pressures from stakeholders can be interpreted and translated into action by managers according to their values, ethics, sex, and contextual factors (Testa, Boiral and Iraldo, 2018); and company employees on the implementation of sustainable marketing strategies (Rudawska, 2019), including employees' attitudes, norms, belief systems (Akhtar *et al.*, 2018), employee pressures (Kang and He, 2018) as well as the impact of HRM practices, especially green human resource management extrinsic related variables such as remuneration, rewards on environmental sustainability (Akhtar *et al.*, 2018; Yu *et al.*, 2020)

The Characteristics of Leadership and Top Management within the Organization

Researchers are also encouraged to incorporate the characteristics of leadership and top management within the organization, to understand the top management's environmental sensitivities and the orientation toward entrepreneurship (Li, Zhou and Wu, 2017) and the impact of top management competencies, specific leadership style, top management pro-social behaviour, top management specific modern skills at micro-level on environmental performance outcomes at the organizational level (Akhtar *et al.*, 2018). Leadership could be investigated in terms of how it might foster the internalization of EMS (Testa, Boiral and Iraldo, 2018).

Resources and Capabilities

In addition, more research needs to be done concerning companies' recourse and capabilities as determents of firm's environmentally friendly strategies. Future research could look at

firm's internal capabilities (Kang and He, 2018) particularly firm's financial slack, performance indicators (Macchion *et al.*, 2017; Kang and He, 2018; Yu *et al.*, 2020), environmental infrastructure (Chan and Ma, 2016; Shaharudin *et al.*, 2019)) and innovation (Macchion *et al.*, 2017) as well as how the integration among different departments (Testa *et al.*, 2018) could have an impact on firm's green strategy.

Ownership factors

A couple of studies also specify that firm's ownership factors could be a direction of subsequent research, for example, variables regarding the field of ownership (Jin *et al.*, 2019) and the concentration of ownership or the existence of a CEO (Martínez-Ferrero and Frías-Aceituno, 2015). Furthermore, in future studies, the ownership of distribution and production activities might be worth studying, because the implementation of sustainable practices in third party facilities might be harder than in directly owned stores or plants (Macchion *et al.*, 2017).

EMS Certifications and Auditing

Environmental Management Systems Certifications and Auditing were also advocated by a few studies to research in the future in terms of the effects of pressures on companies with a certified EMS through the lens of the recent evolutions of institutional theory such as institutional entrepreneurship (Daddi *et al.*, 2016); the role of auditors (Martínez-Ferrero and Frías-Aceituno, 2015) or monitoring on adopting CSLC (Shaharudin *et al.*, 2019).

Internationalization Strategy

In line with the empirical analysis of previous literature, the role of a firm's internationalization strategy was under-researched as a determent of environmentally friendly business strategy. Scholars also called for more research on variables related to the way that firms are internationalized, for example, whether a firm enter foreign markets through greenfield (i.e., establishing entirely new business ventures) or acquisition (i.e., taking over already established firms) approach. Similarly, does the firm expands their business to international following a concentrated (i.e., operating in a few markets) or a spreading (i.e., having activities in many markets) pattern (L. C. Leonidou et al., 2015) and whether firms should develop a geographical (i.e., organized along geographic regions) or functional (i.e., organized according to enterprise

functions) structure (L. C. Leonidou et al., 2015)? These could direct and indirect influencers of firms environmentally friendly business strategy. Moreover, concepts such as captive offshoring, offshore outsourcing and joint ventures (Haleem, Farooq and Wæhrens, 2017) as well as other means of coordination and control such as formalization are also worth studying.

4.5.1.1.2 External determinants of companies' environmentally friendly strategy

Besides the internal determinants, there are researchers indicate that more attention needs to be paid on the impact of the external factors determining an eco-friendly strategy of a company. They encourage future research to be focused on the role of public concern/ national culture (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Tsai and Liao, 2017; Chen, Ngniatedema and Li, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) regulatory frameworks (Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Wu, 2015; Antonietti, De Marchi and Di Maria, 2017; Chen, Ngniatedema and Li, 2018; Joo, Seo and Min, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) suppliers forces (Haleem, Farooq and Wæhrens, 2017; Kang and He, 2018), competitive forces (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Theoharakis, Bicakcioglu and Tanyeri, 2019) economic factors (F. Chen et al., 2018; L. C. Leonidou et al., 2015), the environmental distance between home and host country (L. C. Leonidou et al., 2015), market and industrial factors (Leonidas C Leonidou *et al.*, 2015; Delgado-Márquez and Pedauga, 2017; Kang and He, 2018; Aigbedo, 2019; Theoharakis, Bicakcioglu and Tanyeri, 2019), political actors (Shah, 2015) and network-based factors (Delgado-Márquez and Pedauga, 2017; Bıçakcıoğlu, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) on formulating a green strategy in MNEs, as well as the effects of eco-friendly strategies on performance elements (Macchion *et al.*, 2017; Kang and He, 2018; Yu *et al.*, 2020).

Public Concern/ National Culture

Studies suggested incorporating public concern/ national culture variables to existing research frameworks urge future research to look at (1) the level of public awareness and knowledge in the host country concerning environmental matters (L. C. Leonidou et al., 2015) ; (2) how cultural and norms regarding communication and social norms influence recycling behaviour (Shaharudin *et al.*, 2019).

Regulatory Contexts

Research that considers the effects of specific regulatory contexts in more depth should also be pursued, as the extent to which the costs of carbon emissions are internalized is highly dependent on historical and institutional conditions (Misani and Pogutz, 2015). In addition the rigidity of environmental regulations (Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Chen, Ngniatedema and Li, 2018; Q. Li *et al.*, 2018; Shaharudin *et al.*, 2019; Theoharakis, Bicakcioglu and Tanyeri, 2019) the role of Policymakers (Antonietti, De Marchi and Di Maria, 2017; Pitelis *et al.*, 2019; Pitelis, Vasilakos and Chalvatzis, 2020) and government, in helping to improve more specific firm (e.g., functional) performance (Joo, Seo and Min, 2018), green issues intervention (Leonidas C Leonidou *et al.*, 2015) and other influences associated with different levels of government (Wu, 2015) prompt of further research.

Suppliers' Forces

For future studies that investigate suppliers' forces, they could particularly look at supply chain partners pressures (Kang and He, 2018) and consider the environmental performance of the supplier (Haleem, Farooq and Wæhrens, 2017) as well as the long-term relationship orientation and supplier involvement (Li, Zhou and Wu, 2017).

Competitive Force

Competitive force is also one of the factors that merit more research, especially in the direction of the nature of environmental strategies adopted by both domestic and international rivals (L. C. Leonidou et al., 2015) (Theoharakis, Bicakcioglu and Tanyeri, 2019).

Market/Industry Variables

Another possible area of future research referring to external determents includes doing a multi-industry study to assess the impact of the Market or industry pressures on adopting environmental strategies (Aigbedo, 2019; Theoharakis, Bicakcioglu and Tanyeri, 2019).

Precisely associations recommended for further research are (1) the relationship between industrial regulation and the environmental strategy (Delgado-Márquez and Pedauga, 2017); (2) the effect of other potential boundary factors (e.g. market orientation) (Theoharakis, Bicakcioglu and Tanyeri, 2019); (3) the possible role of characteristics pertaining to industry (e.g. environmental exposure) (Leonidas C Leonidou *et al.*, 2015) ;(4) consumer pressures (Kang and He, 2018) and distinguish the specific markets targeted by exporting firms in terms of their level of consumer environmentalism (Leonidas C Leonidou *et al.*, 2015); and (5) Examine the effect from an industry-specific perspective (Theoharakis, Bicakcioglu and Tanyeri, 2019).

Network-based factors

Bıçakcıoğlu (2018) suggested that network-based factors need further study, especially the effect on the adoption of green business strategies. In the same vein, Theoharakis et al., (2019) echoed this advocacy by pointing out a direction of future research to investigate the dyadic links between exporters and importers concerning green issues within international business settings. Contrarily, Delgado-Márquez and Pedauga, (2017) propose a geographical approach for future research to address how the networking of each MNE in different countries.

Home-Host Environment Distance

In terms of home-host environment distance, the degree of the psychological distance separating headquarters from host countries can be a future focal point of research (L. C. Leonidou et al., 2015).

Political Factors

The role of local political culture and interventions in the interplay between corporate environmental responsibility and environmental regulatory pressures need to be further to address the influence of political factors on firms' green strategy as a significant external determent (Shah, 2015).

4.5.1.1.3 Potential moderator/mediators

Besides suggesting new variables that are associated with internal and external determents green strategy, a considerable amount of scholar advice future work to develop the research framework by examining variables that potentially moderate (Leonidas C Leonidou *et al.*, 2015; Wagner, 2015; Wu, 2015; Sancha, Wong and Thomsen, 2016; Tsai and Liao, 2017; Jiang *et al.*, 2018; Aigbedo, 2019) or mediate (Leonidas C Leonidou *et al.*, 2015; Tsai and Liao, 2017; Shaharudin *et al.*, 2019) the links between MNEs green strategy and its antecedents or outcomes. For example, the moderating effect of both macro and micro international business parameters on the MNEs green strategy and its antecedents/outcomes axis.

Macro- Environment Moderators

Authors recommendations for future research include further investigation of moderators belonging in the macro, and micro-environment firms were operating. In the macro level the psychological distance between the home and host market on the link between environmentally friendly business strategy and competitive advantage and the contingent role of various strategic options opens to the exporting firm, such as foreign market concentration versus spreading, in shaping an environmentally friendly business strategy was suggested for further research (Leonidas C Leonidou *et al.*, 2015) . Furthermore, the interaction effect between these two mechanisms (transactional or relational) and the effectiveness of these mechanisms under other different contingencies (e.g., environmental uncertainty) (Sancha, Wong and Thomsen, 2016); the combined effects of GHRM and GSCM on firm performance, (Yu *et al.*, 2020) also could be examined. Finally, the interaction effects between industry variables and the headquarter location is an area of further enquiry. Studies might find, for example, that headquarter location is critical only in some industries (Aigbedo, 2019).

Micro-Environment Moderators

In regards with moderating effects source from the micro-environment firms were operating the following were suggested: 1)The degree of firm's export involvement on the link between environmentally friendly business strategy and competitive advantage (Leonidas C Leonidou *et al.*, 2015) 2) how firm-specific capabilities moderate the relationship between customer pressures and firm environmental strategies (Wu, 2015). 3) The moderating effects of

management commitment, systems thinking and experimental capabilities (Tsai and Liao, 2017) and 4) the mechanism of linking green entrepreneurial orientation with firm performance under different situations link (Jiang *et al.*, 2018).

Potential Mediators

Apart from potential moderators, the mediating role of environmental proactivity between the contingency of company features (e.g., firm size) and external factors (e.g., industry sector) also worth exploring. Furthermore, (Leonidas C Leonidou *et al.*, 2015) and (Shaharudin *et al.*, 2019) call for the examination of the role of firm's eco-orientation (either external or internal) and green capabilities in mediating the links between determinants of eco-friendly business strategy.

4.5.1.2 New Topics

Various studies proposed new topics on the contrary to developing the existing research models, mainly related to (1) how MNEs approach or implement Environmental Strategies within the organizations, and (2) the issues regarding the focus of environmental strategies.

4.5.1.2.1 Approach- Implementation of Environmental Strategies

Rudawska (2019), called for future research to examine the integration of sustainability initiatives at a functional level (marketing strategies) and at the corporate level (corporate philosophy, procedures, culture and processes). In the same line, the study proposed further research on opportunities and threats of sustainable marketing diffusion throughout an organization. The differentiation between reactive green business strategies (i.e., regulatory-driven) and proactive green business strategies (i.e., voluntarily driven) is an area of concern that merits further research (Theoharakis, Bicakcioglu and Tanyeri, 2019) as well as determining the proper group of resources and capabilities required for a company to adopt a reactive or proactive environmental strategy and their effects on competitive advantage and various performance dimensions (L. C. Leonidou et al., 2015). Additional topics related to the role of the benefit-related factors for the implementation of Environmental Management

System, the ecological effects from a more strategic integration of HR and environmental management (Wagner, 2015) and how the conflicting demands from multiple stakeholders embedded in different institutional logics are managed, in adopting environmental practices within the organization (Testa, Boiral and Iraldo, 2018).

4.5.1.2.2 Focus of Environmental Strategy

A second stream of literature point out the need for future research concerning the focus of the environmental strategies. For example, Testa et al., (2018) propose further research to examine how organizational learning processes can hinder a symbolic adoption of green practices and, as a consequence, disincentivize greenwashing strategies whether firm-level greenwashing or brown washing strategies can be altered via governance mechanisms by which firms are controlled and managed. Chen et al., (2016a) propose a new model incorporating innovative products and services that will be more affordable and adaptable to the people from developing countries. Finally, a number of studies (Corrocher and Solito, 2017; Sadovnikova and Pujari, 2017; Vastola, Russo and Vurro, 2017) propose future research to examine the impact of different mixes of value capturing green strategies on difference firm performance metrics which is a matter of concern in the current thesis under the two empirical studies examined.

4.5.2 Method Related

For the future directions that are related to the method of study, the analysis shows that the suggestions fall into three categories: research context, research design and variable measurement.

4.5.2.1 Research context

Several studies urge future research to extend the research context to different industry (Misani and Pogutz, 2015; Wu, 2015; Daddi *et al.*, 2016; Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016; Sadovnikova and Pujari, 2017; Akhtar *et al.*, 2018; Al-Ghwayeen and Abdallah, 2018; Auer, 2018; Aigbedo, 2019; Rudawska, 2019), some studies suggest future research look at the different context in relation to geographical location (Wu, 2015; Leonidas C Leonidou *et al.*, 2015; Baral and Pokharel, 2017; Sadovnikova and Pujari, 2017; Czerny and Letmathe, 2017; Haleem, Farooq and Wæhrens, 2017; Macchion *et al.*, 2017; Bıçakcıoğlu, 2018; Jiang

et al., 2018; Joo, Seo and Min, 2018; Liu *et al.*, 2018; Q. Li *et al.*, 2018; Shaharudin *et al.*, 2019; Yu *et al.*, 2020) and firm type (Achabou, Dekhili and Hamdoun, 2017; Baral and Pokharel, 2017; Corrocher and Solito, 2017; Sadovnikova and Pujari, 2017)

Different Context in Relation to Industry

Future research would benefit from follow-up studies in other industries (Akhtar *et al.*, 2018), (Aigbedo, 2019) or economic sectors (Rudawska, 2019), (Daddi *et al.*, 2016), (Sancha, Wong and Thomsen, 2016) given that the underlying constructs can behave differently. They are also advised to replicate the studies in sectors with particular characteristics such as high demand volatility, international supply networks and seasonal productions, (Macchion *et al.*, 2017) or low pollution industries (Misani and Pogutz, 2015) or industries showing negative environmental trends (Auer, 2018) or industries with less dynamic environments (Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016) for generalizing the findings of existing studies (SP179, (Al-Ghwayeen and Abdallah, 2018) or compare the findings between different industries (Liu *et al.*, 2018).

Different Context in Relation to Geographical Location

Future research would benefit by testing different institutional contexts (Czerny and Letmathe, 2017; Haleem, Farooq and Wæhrens, 2017; Sadovnikova and Pujari, 2017; Akhtar *et al.*, 2018; Yu *et al.*, 2020) for example different economic, socio-cultural, and political-legal settings (Leonidas C Leonidou *et al.*, 2015) for comparison reasons (Liu *et al.*, 2018) with particular attention in the context of developed (Shaharudin *et al.*, 2019), emerging or transitional economies (Jiang *et al.*, 2018; Q. Li *et al.*, 2018).

Different Context in Relation to Firm Type

Future research should outreach their focus to large companies. Previous studies such as (Daddi *et al.*, 2016; Achabou, Dekhili and Hamdoun, 2017; Corrocher and Solito, 2017) mentioned in their studies that there is a need to extend current studies through additional company samples in different activity sectors with different sized companies (mainly large companies) to increase

the external validity of the results and understand the different effects of institutional pressures in small and medium companies respect to the large ones. However, the exploration of how small and medium-sized companies (SMEs) use green partnerships (Sadovnikova and Pujari, 2017) cannot be neglected. Furthermore, more research is warranted in small-cap and privately-owned companies (Baral and Pokharel, 2017).

4.5.2.2 Research design

Data Collection Process

Future research is encouraged to collect data from multiple respondents' perspectives and take more professionals into consideration, which could increase the validity and reliability of the research by providing a more comprehensive analysis (Al-Ghwayeen and Abdallah, 2018; Jiang *et al.*, 2018; Q. Li *et al.*, 2018; Yu *et al.*, 2020). Future research in this area will also need to collect sufficient data to increase the sample size (Macchion *et al.*, 2017; Chen, Ngniatedema and Li, 2018; Joo, Seo and Min, 2018; Kawai, Strange and Zucchella, 2018) and response rate, as well as broaden sectors of activity, in order to increase the reliability of data (Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016).

The Research Design

Some studies suggested that future studies should use a quantitative methodological approach (Bıçakcıoğlu, 2018), especially the use of survey (Baral and Pokharel, 2017; Haleem, Farooq and Wæhrens, 2017; Q. Li *et al.*, 2018; Aigbedo, 2019) this would be useful to study the mechanisms and assess how companies implement initiatives to disseminate environmental policies in their operations around the world (Aigbedo, 2019) and investigate how the looser forms of collaboration can lead to sustainable practices, perhaps through the use of surveys (Bıçakcıoğlu, 2018). Also, more quantitative variables can be included in the model to assess what factors predict the emergence of the sustainability themes in the strategic documents (Baral and Pokharel, 2017).

There are several studies, encouraging future research to adopt more qualitative research methods, including in-depth interviews and case studies (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Akhtar *et al.*, 2018; Testa, Boiral and Iraldo, 2018; Rudawska, 2019), indicate that a

more qualitative analysis in the form of case studies would also facilitate a deeper understanding of the interconnections of the constructs of research in this area. Furthermore, Rudawska (2019) mentioned that in-depth interviews and case studies with SME managers on the scope and motives to understand the implementation of the sustainable marketing concept. Similarly, Testa, Boiral, et al. (2018) indicates that qualitative interviews among managers and representatives of the main stakeholders could be used further to investigate the role of external pressures on environmental practices. Qualitative research could provide an in-depth understanding of greenwashing and brown washing strategies embedded in organizational settings; however, mixed methods and qualitative research methods can be helpful in answering the aforementioned research questions of "why" and "how" (Testa *et al.*, 2018).

Time Frame of the Data

There are recommendations among previous studies in regard to the time frame of future research, including embarking on longitudinal studies (Wu, 2015; Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Haleem, Farooq and Wæhrens, 2017; Macchion *et al.*, 2017; Akhtar *et al.*, 2018; Bıçakcıoğlu, 2018; Chen, Ngniatedema and Li, 2018; Kang and He, 2018; Kawai, Strange and Zucchella, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019; Rudawska, 2019) consider a greater number of years (Pucheta-Martínez and Gallego-Álvarez, 2018; Shi and Xu, 2018); more recent data (Bu and Wagner, 2016) different economic cycles (Testa *et al.*, 2018). A considerate amount of studies in the sample employed cross-sectional data; thus, future research could focus on longitudinal studies (Rudawska, 2019), as longitudinal studies would shed more light about the long-term effects of eco-friendly strategies (Theoharakis, Bicakcioglu and Tanyeri, 2019) and investigate the causal effects between their antecedents and outcomes. Wu (2015) for example, indicated that research using a longitudinal design is still required to tackle the dynamics of or coevolution between customer pressures and firm environmental strategies and to address causality issues. Finally, it would also be useful to understand whether firms' environmental strategies vary across economic cycles, future studies could assess the persistence of green strategies over time, especially in times of crisis (Testa *et al.*, 2018).

4.5.2.3 Variable measurement

Several studies call for the refinement of environmental and performance indicators measurement, including (1) The measure of EMS: (Kang and He, 2018) encourage future research to construct a more comprehensive measure; Furthermore, (Kawai, Strange and Zucchella, 2018) suggested to use an objective measure of an EMS, such as ISO14001 participation in order to build confidence in empirical evidence. (2) The measures of environmental and financial performance. Shah, (2015) explained that corporate environmental responsibility (CER) is also a perceptual measurement that later on, can be compared to compliance/non-compliance or physic-chemical indicators of environmental performance if/when such data becomes available, a typical challenge in developing country contexts. (3) The measure of environmental processes could be refined through the addition of a more precise division between process and outcome scores (Misani and Pogutz, 2015); (4) Other measures conceptualizing sustainable marketing mix tools (Rudawska, 2019) need to be developed.

Table 4.6: Future Trends from Existing literature (2015-2019)

Subject		**Un(der)researched Topics**
A. Research theme related	A1. Development of existing frameworks and suggestions of new variables	1. Incorporate new variables in existing models in relation to the internal determinants of an environment-friendly strategy. • *What is the role of organizations' culture characteristics* (Joo, Seo and Min, 2018; Kang and He, 2018; Testa *et al.*, 2018; Rudawska, 2019) *corporate governance area* (Leonidas C Leonidou *et al.*, 2015; Akhtar *et al.*, 2018; Kang and He, 2018; Pucheta-Martínez and Gallego-Álvarez, 2018; Testa, Boiral and Iraldo, 2018; Rudawska, 2019; Yu *et al.*, 2020), *leadership and top management characteristics* (Akhtar *et al.*, 2018; Testa, Boiral and Iraldo, 2018), *ownership* (Martínez-Ferrero and Frías-Aceituno, 2015; Jin *et al.*, 2019), *environmental certifications and auditing bodies* (Martínez-Ferrero and Frías-Aceituno, 2015; Daddi *et al.*, 2016; Shaharudin *et al.*, 2019), *specific resources and capabilities* (Macchion *et al.*, 2017; Kang and He, 2018; Testa *et al.*, 2018; Yu *et al.*, 2020), *and international strategies* (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Macchion *et al.*, 2017) *on the adoption and implementation of an eco-friendly strategy in MNEs.* 2. Incorporate new variables in existing models concerning the external factors determining an eco-friendly strategy. • *The role of public concern/ national culture* (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Tsai and Liao, 2017;

Subject		Un(der)researched Topics
		Chen, Ngniatedema and Li, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019), *regulatory frameworks* (Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Wu, 2015; Antonietti, De Marchi and Di Maria, 2017; Chen, Ngniatedema and Li, 2018; Joo, Seo and Min, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019), *suppliers' forces* (Haleem, Farooq and Wæhrens, 2017; Li, Zhou and Wu, 2017; Kang and He, 2018), *competitive forces* (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Theoharakis, Bicakcioglu and Tanyeri, 2019), *economic factors* (F. Chen et al., 2018; L. C. Leonidou et al., 2015), *the environmental distance between home and host country* (L. C. Leonidou et al., 2015), *market and industrial factors* (Leonidas C Leonidou *et al.*, 2015; Delgado-Márquez and Pedauga, 2017; Kang and He, 2018; Aigbedo, 2019; Theoharakis, Bicakcioglu and Tanyeri, 2019), *political actors* (Shah, 2015) *and network-based factors* (Delgado-Márquez and Pedauga, 2017; Bıçakcıoğlu, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) *on formulating a green strategy in MNEs.* 3. Variables that potentially moderate or mediate the existing relationships • *Examine the role of the firm's eco-orientation (either external or internal) and green capabilities in mediating the links between determinants of eco-friendly business strategy* (Leonidas C Leonidou *et al.*, 2015; Shaharudin *et al.*, 2019). *The mediating role of environmental proactivity between the contingency of company feature (e.g. firm size) and external factors (e.g. industry sector)* (Leonidas C Leonidou *et al.*, 2015; Tsai and Liao, 2017; Shaharudin *et al.*, 2019)
	A2. New Topics	Proposed topics in relation to how MNEs approach or Implement Environmental Strategies: *1. Integration of sustainability initiatives at a functional level (marketing strategies) and the corporate level (corporate philosophy, procedures, culture and processes (Rudawska, 2019).* *2. How sustainability marketing is being embedded throughout an entire organization, and what are the opportunities and threats for organizations as they embrace sustainability issues into company marketing strategies and operations (Rudawska, 2019)?* *3. Discriminate between reactive green business strategies* (Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Bıçakcıoğlu, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019) *4. Analyse the relative role of the benefit-related factors for the implementation of an Environmental Management System (Wagner, 2015)* *5. The question of ecological effects from a more strategic integration of HR and environmental management (Wagner, 2015).*

Subject		Un(der)researched Topics
		6. *Investigate the combined effects of Green human resource management and Green supply chain management on firm performance (such as social, financial, and operational performance measures* (Yu *et al.*, 2020). 7. *How the sometimes conflicting demands from multiple stakeholders embedded in different institutional logics are managed, in adopting environmental practices within the organization* (Testa, Boiral and Iraldo, 2018). Proposed topics regarding the focus of environmental strategies: 1. *Explore a more inclusiveness business model that could offer innovative products and services that are affordable and adaptable to the people from developing countries* (Chen, Ong and Hsu, 2016a). 2. *The analysis of the impact of different mixes of value capturing green strategies on firm performance* (Corrocher and Solito, 2017). 3. *Whether green partnerships with multiple partners, vertical and horizontal, make any difference to changes in stock returns* (Sadovnikova and Pujari, 2017). 4. *How organizational learning processes) can hinder a symbolic adoption of green practices and, as a consequence, disincentivize greenwashing strategies whether firm-level greenwashing or brown washing strategies can be altered via governance mechanisms by which firms are controlled and managed (Testa et al., 2018).* 5. *Link the internal perspective on management tools with cultural orientations acting as spur or constraint for a successful sustainability strategy, underlying the conditioning of its financial consequences* (Vastola, Russo and Vurro, 2017).
B. Methodology related	B1. Research context	1. Different context in relation to industry: • *Replicate the studies in sectors with particular characteristics such as high demand volatility, international supply networks and seasonal productions* (Macchion *et al.*, 2017), *low pollution industries* (Misani and Pogutz, 2015), *industries showing negative environmental trends (Auer, 2018), or industries with less dynamic environments* (Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016) *for generalizing the findings of existing studies* (Al-Ghwayeen and Abdallah, 2018) *or compare the findings between different industries* (Liu *et al.*, 2018). 2. Different context in relation to geographical location: • *Future research would benefit by testing different institutional contexts* (Czerny and Letmathe, 2017; Haleem, Farooq and Wæhrens, 2017; Sadovnikova and Pujari, 2017; Akhtar *et al.*, 2018; Yu *et al.*, 2020) *for example different economic, socio-cultural, and political-legal settings* (Leonidas C Leonidou *et al.*, 2015) *for comparison reasons* (Liu *et al.*, 2018) *with particular attention in the context of*

Subject		Un(der)researched Topics
		developed (Shaharudin *et al.*, 2019) *emerging or transitional economies* (Jiang *et al.*, 2018; Q. Li *et al.*, 2018). 3. Different context in relation to Firm type: • Focus on large companies (Achabou, Dekhili and Hamdoun, 2017; Corrocher and Solito, 2017) SMEs (Sadovnikova and Pujari, 2017) and private owned companies (Baral and Pokharel, 2017);
	B2.Methodological-Data Related	1) Recommendations based on the data collection process. • *Collect data from multiple respondents' perspectives* (Al-Ghwayeen and Abdallah, 2018; Jiang *et al.*, 2018; Q. Li *et al.*, 2018; Yu *et al.*, 2020) , *increase sample size* (Macchion *et al.*, 2017; Chen, Ngniatedema and Li, 2018; Joo, Seo and Min, 2018; Kawai, Strange and Zucchella, 2018) *and response rate* (Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016). 2) Recommendations in regard to the research design of the study: • *Future studies should use a Quantitative methodological approach (Bıçakcıoğlu, 2018), e.g. survey methodology* (Baral and Pokharel, 2017; Haleem, Farooq and Wæhrens, 2017; Q. Li *et al.*, 2018; Aigbedo, 2019) *in-depth interviews and case studies* (Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Akhtar *et al.*, 2018; Testa, Boiral and Iraldo, 2018; Rudawska, 2019)*; mixed methods and qualitative research methods* (Testa *et al.*, 2018). 3) Recommendations in regard to the time frame of future studies: • *Embark on longitudinal studies* (Wu, 2015; Leonidas C Leonidou *et al.*, 2015; Leonidas C. Leonidou, Leonidou, *et al.*, 2015; Haleem, Farooq and Wæhrens, 2017; Macchion *et al.*, 2017; Akhtar *et al.*, 2018; Bıçakcıoğlu, 2018; Chen, Ngniatedema and Li, 2018; Kang and He, 2018; Kawai, Strange and Zucchella, 2018; Theoharakis, Bicakcioglu and Tanyeri, 2019; Rudawska, 2019)*; consider a greater number of years* (Pucheta-Martínez and Gallego-Álvarez, 2018; Shi and Xu, 2018)*; more recent data* (Bu and Wagner, 2016)*; different economic cycles* (Testa *et al.*, 2018).
	B3. Variables Measurement	1) Refined measures of environmental and performance indicators measurement: • *Comprehensive measures of Environmental management systems* (Kang and He, 2018), *environmental management processes* (Misani and Pogutz, 2015; Shah, 2015) *and sustainable marketing mix (Rudawska, 2019).*

4.6 Discussion and Future Directions

While the research on environmental strategies of firms engaged in international activities can be characterized insightful and adequate, it is profound that is only at its early stage of development. However, the findings sourced from the systematic review analysis of 118 empirical studies revealed a growing interest in environmental international business research. The advanced nature of the topic examined, resulted in its relatively late examination with a handful of articles identified in the first chronological period examined (2001-2007). The body of articles published is obviously influenced by 1) with major international environmental events such as the Paris Agreement, 2) the various macro (e.g. regulatory, socio-cultural), meso (e.g. industrial), and micro (consumers, competitors, suppliers) forces conducive to the firm's international activities 3) advancement in methodological and data capacity stimulating increased attentiveness from an academic, corporate and policy-making perspective on the environmental activities of firms with an international presence.

In terms of the articles' scope, the review study revealed that the deviation between the studies focusing on developed compared with emerging economies shrunk in the last chronological period. Further research should focus on firms with a global presence and focus on the activities of individual outlets in different institutions. Cross-cultural studies could contrast different institutional pressures or examine the effect of culture (e.g., masculinity/femininity, power distance, long-term orientation) on institutional settings. The vast majority of the studies have mixed industry samples, thus providing space for cross-industry studies for comparison reasons. Variations could refer to the industry's competitive intensity, dynamism, or pollution levels as (Misani and Pogutz, 2015; Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016) suggested. However, mixed industry samples failed to capture the idiosyncrasies of each industry. The applicability of each environmental strategy varies from industry to industry on its impact, outcome and characteristics. Comparing different industries with significant diverse operations in regard to their environmental sustainability strategies is equivalent of comparing apples with oranges and generalisability of the results should be treated with caution. As more firms are engaged in reporting their environmental practices the ability of researchers to examine samples consisting of firms with similar nature of activities will increase. In response, the empirical studies of this thesis focus on one industry, the tourism and hospitality achieving consistent comparisons of the firms included in the sample.

Furthermore, the review revealed a lack of existing literature on specific economic sectors and certain industries. It is essential that further research focusing on the primary economic sector will be pursued since only two articles were found in this domain. Despite the abundant research on the secondary sectors of the economy and particularly manufacturing firms, there is a lack of adequate research on the service-tertiary sector, which is another point of concern this thesis is tackling. Another major shortcoming of the existing literature is the absence of studies combining firm and consumer-level data. Apart from one study, the rest of the articles solely focus on firm-level data missing the opportunity to examine the synergies between consumer and firm dynamics. Further research in the area will benefit from the input of consumers on firms' environmental strategies for a holistic examination of the environmental sustainability issue.

Methodologically, the review study revealed that research relying on longitudinal studies is limited compared to cross-sectional data studies. However, it appears that recent studies are responding to the calls from previous literature; thus, there is a slight increase of longitudinal data studies in the last chronological period. Although historically there are concerns of causality and robustness of the results at corporate environmental sustainability issues, existing studies in their majority do not perform endogeneity or robustness tests, therefore failing to ease the concerns about their replicability. Finally, embarking on secondary data sources could be a major issue due to the lack of consistency in ESG reporting. There is an absence of an internationally approved mechanism that will audit ESG reporting. The quality and quantity of databases collecting ESG data can be described as variegated and uneven due to the lack of uniform guidelines on disclosures posing significant challenges on understanding corporate sustainability overall. Future research in the domain should ensure to use databases where the process of collecting data is transparent, and quality is preserved and ensured through different mechanisms.

Moving to the theoretical assessment of the articles, the systematic review revealed the atheoretical nature of the previous literature. In particular, 41.3 percent of the studies did not rely on any theoretical background to explain the phenomena examined. That resulted in data-driven research publications rather than an orthodox conceptualisation of the topics. An additional 32.3 percent relied on a single theory, mainly the traditional institutional or Resource-based View paradigms. Although RBV is useful in examining the internal organisational drivers for green strategies and institutional theory for understanding the

external forces for adopting them, their application poses certain limitations that seem to be ignored in the existing literature. The RBV relies on heterogeneity between firms; therefore, it should be used to compare firms engaged in similar activities, which is not evident in the existing literature. Furthermore, it fails to explain the firm's external environment since it is focused on the internal environment of an organisation (Lockett, Thompson and Morgenstern, 2009). On the other hand, the institutional theory fails to explain the dynamics of a firm's internal environment; therefore, it fails to explain the antecedents and outcomes of an environmental strategy as a stand-alone theory.

The complexity of the issue examined require advancement or/ and a combination of theories from different disciplines such as 1) sociology 2) economics 3) environmental science. On a positive note, a growing trend of studies grounded on a combined or advanced theoretical paradigm is observed. Therefore, future research should consider the limitations each theory imposes and make use of theoretical frameworks according to the context and aims of the study.

New theories could include 1) Institutional change theory to examine changes of the institutional environment through different stages 2) Social network theory to interpret the effects of density in the network, satisfaction, trust and centrality on environmental practices at the organizational level 3) Social movements theory for understanding how targeted activism can generate organizational change 4) Network theory, to examine the effect of network membership on executing environmental strategies 5) Environmental spillovers to investigate the transfer of environmental knowledge from home to host countries and the adoption of environmental practices.

Environmental research on firms engaged in international activities covered a wide range of topics. As expected, the thrust was on the focus of the environmental strategies followed, referring mainly to an overall measure of the strategy followed or the eco-friendly marketing mix implemented. Regarding the antecedents of green strategies, the macro-environment a firm is operating, and the capabilities conductive to the firm were the centre of attention of the researchers. Furthermore, topics such as organizational complexity and competitive advantage received moderate attention while approaches to eco-friendly strategies were rarely tackled from the international environmental strategy research.

A major drawback of existing research is identified on the way researchers operationalize environmental sustainability. The one size fits all operationalization of the environmental sustainability constructs prevents researchers from identifying the effects of certain environmental strategies as well as their specific facilitators of certain. This leads to mixed findings on the antecedents and performance outcomes of eco-friendly strategies sending mixed signals to managers and policymakers. The particular drawback identified in the review is the main matter of concern in the first empirical study (Chapter 5) where a multi-dimensional approach will be followed to explain the mix results on the antecedents and outcomes of environmental strategies.

Further research should pay more attention to the proactive-reactive nature of the strategies adopted and the standardization adaptation of those strategies in host country outlets. The organizational complexity literature regarding firms' organizational design subtopic could shift their attention to other firms' characteristics rather than their size and foreign ownership. Factors such as the dependability on the host country and CEO personal characteristics merit further research. Finally, although the review includes only studies with sampled firms engaged in international activities, only a few studies researched their internationalization features. Beyond question, issues examining the configuration/ entry mode, the internalization of environmental strategies, the geographical spread, international experience and the extend of standardization adaptation of firm’s environmental strategies merit further research.

4.7 Limitations

The findings of the study should be seen within the context of certain limitations and delimitations. First, the study focused on the role of environmental sustainability in international marketing/ management literature as a fragmental concept while a plethora of articles refer to environmental sustainability as part of the Corporate Social Responsibility concept for example (Eteokleous, Leonidou and Katsikeas, 2016; Pisani *et al.*, 2017) in their international dimension, other reviews referred to environmental management/ marketing as an individual dimension (Leonidou and Leonidou, 2011; Aykol and Leonidou, 2015) rather that its international dimensions have rarely been examined.

Furthermore, the study could be supplemented with a bibliometric analysis where linkages between thematic areas and citations could be determined. The impact of the papers could be

evaluated through citations or the affiliated journal rankings. Finally, the study solely focuses on the environmental behaviour of firms and neglected studies focusing on the consumers' environmental perceptions. A supplementary review could augment the study findings to provide a holistic picture from both the firm and consumer dynamics.

Lastly, the choice to limit the sample of articles using certain criteria impose certain delimitations. Limiting the sample to CABS published journals could omit articles suitable to be involved in the review. For the same reason, the possibility of capturing articles through monographs, conference proceedings, theses and book chapters was eliminated. In the same vein, articles written in different languages rather than English were not in the scope of the study, although the environmental sustainability subject has gained global momentum.

5. Internal drivers and performance outcomes of environmental strategies: A Natural Resource Based-view of firms in the hospitality sector

5.1 Introduction

Notably, the relatively limited literature on the environmental strategies of hospitality firms, as indicated from the Systematic Review of the thesis (Chapter 4) and previous literature, in comparison with other industries of the economy, has been criticised for producing heterogeneous results and having no clear direction (Aragon-Correa, Alberto and Martin-Tapia Inmaculada de la Torre-Ruiz, 2015; Yu and Chiu, 2021). In fact, this was mainly attributed to ineffectively incorporating broadly accepted theoretical frameworks from the management literature (Aragon-Correa et al., 2015), the lack of consensus for conceptualising and operationalising green-related constructs (Walls, Phan and Berrone, 2011), and the tendency to use measurement scales developed with a particular focus on manufacturing firms (Maas, Schuster and Hartmann, 2014). The majority of empirical studies do not quantitatively measure the role of companies and there has been little ongoing integration of theory and data from the natural sciences within the business and environment literature (Whiteman, Walker and Perego, 2013). Perhaps, the most trenchant criticism has been about the inappropriate use performance outcome measures, which has created much confusion as to whether sustainability practices in the hospitality sector indeed contribute to superior performance (Alshehhi, Nobanee and Khare, 2018).

In response to the above criticisms, the purpose of this study is to explore the antecedents and performance implications of sustainability practices of firms in the hospitality sector having as a theoretical base the Natural Resource Based-View (NRBV) of the firm (Hart, 1995). Specifically, the study objectives are threefold: (a) to examine the effect of various organisational drivers (i.e., top management environmentalism, environmental proactiveness, and environmental targeting/orientation) on firms' sustainability strategies; (b) to explore the effect of each of these sustainability strategies on financial performance; and (c) to investigate the effect of various firm characteristics of the firm on both its sustainability strategies and financial performance.

The study contributes to the hospitality management literature in several major ways. The Natural Resource-based View (NRBV) theory within the context of companies providing services in general and the hospitality industry, in particular, is novelty applied. Although this theory was initially developed with a particular focus on manufacturing firms, this study shows that it could be equally applicable in the case of firms in the hospitality sector by taking into

consideration some additional dimensions that are idiosyncratic to them. For example, the high level of customer involvement in high contact service systems is identified as one of the most important idiosyncrasies of the industry (Kassinis and Soteriou, 2003) while Foster Jr, Sampson, and Dunn, (2000) found that it can improve environmental protection activity. Furthermore, activities such as waste reduction and management might take place in the absence of the customer, while activities such as service eco-friendliness or efficiency measures are more apparent.

Second, in light of the previously mentioned conflicting findings regarding the effect of sustainability strategies on firm performance (e.g., Lewandowski, 2017), I take a compromising stance by arguing that various strategies may have a different impact on financial performance. In particular, a possible explanation is that this variation observed in previous findings stems from using either inappropriate or aggregate measures of environmental performance. Since the environmental protection activities of a company are integrated along the whole spectrum of corporate activities, a multi-dimensional approach must be followed to cope with the multi-functionality of the term (Van Marrewijk and Werre, 2003).

Third, there is limited research in the pertinent literature on factors driving the development of sustainable strategies, particularly within the context of hospitality firms, which requires expansion with new ideas (Hart and Dowell, 2011). For example, although at country level, there has been ample research stressing the role of setting specific targets (e.g., Bishop, Amaratunga, and Rodriguez, 2008; Chalvatzis and Ioannidis, 2017), I take the position that these could also be used at the micro-business level to see whether they can be conducive to developing and materialising firms' sustainability strategies.

The remainder of the article is organized as follows. First, prior research on the antecedents and outcomes of firms' sustainability strategies in the hospitality industry is reviewed. Then, the underlying premises of the NRBV theory and highlight certain adjustments that need to be made in the context of hospitality firms are explained. This is followed by an explanation of the conceptual model and the development of the research hypotheses. The results relating to the testing of the hypotheses are subsequently presented. In the final sections (5.6-5.8) I draw conclusions, extract implications, and suggest directions for future research while indicating the study limitations.

5.2 Previous Research

Initial research on the environmental strategies followed by companies in the hospitality sector first made its appearance in the late 1990s, with multiple studies conducted since then on the subject. For the purposes of this study, previous research is organised in three major areas: 1) factors influencing environmental strategies, 2) the nature of environmental strategies, and 3) performance outcomes of these strategies.

5.2.1 Factors Influencing Environmental Strategies

Factors driving the adoption of effective environmental strategies/practices in the hospitality sector that were examined in the extant literature can be broadly categorised into external and internal. With regards to external factors, Kasim (2007), through extensive interviews with executives of Malaysian hotels, found that external drivers, such as community pressures sourced from NGOs and consumer protection groups, regulatory pressures imposed from government, as well as sectoral pressures, e.g. introducing environmental criteria into hotel rating systems, sustainability indicators crafted for tourism industry) are the most potent forces facilitating hotel pro-environmental action. Also, work grounded on the stakeholder theory revealed that the pressure from stakeholders is a serious determinant of hotels' environmental management practices. Specifically, 1) legitimacy gain within society, 2) responses to stakeholders pressures referring to the perceived concern of influential stakeholders in regard to environmental issues 3) the extent to which powerful stakeholders impose explicit demands on the associated organisation are identified as the three main reasons for the adoption of environmentally friendly policies (Gil, Jiménez and Lorente, 2001; Céspedes-Lorente, de Burgos-Jiménez and Álvarez-Gil, 2003). In theory, (Ashforth and Gibbs, 1990) organisations engage in environmental sustainability strategies to achieve certain objectives, including repairing, maintaining, or gaining legitimacy from society. The gain of legitimacy and social acceptance can be achieved through symbolic and/or substantive management tactics. A strategy aiming at a symbolic legitimating recognition will demonstrate commitment to environmental sustainability targets to win the support of the stakeholders but will lack any meaningful contribution in real terms. On the other hand, a substantive legitimating management strategy will seek real change and contribute to social and environmental issues (Crossley, Elmagrhi and Ntim, 2021; Vafadarnikjoo *et al.*, 2021).

Further studies (Mair and Jago, 2010; Pusparini *et al.*, 2018) identified mass-media as an additional external driver, in that they influence the way individuals perceived problems and they can turn public attention towards certain directions. Thus, media coverage of environmental sustainability issues can drive a company's level of greening due to the risk of reputational damages sourced from negative media coverage (Van Marrewijk and Werre, 2003). Fostering an ethical culture and adopting voluntarily environmental friendly actions found to be more profound in international hotel chains, implying the increased exposure such organisations have to social criticism.

Finally, a central factor studied by the tourism literature is the green standards set by Quality Assurance companies (Ayuso, 2007; Rodríguez-Antón *et al.*, 2012; Ioannidis *et al.*, 2021) and implemented by systems developed internally within the company. The research on hospitality and tourism firms has shown that the main motive addressed by managers for implementing EMS is often public recognition of environmental commitment. For example, a sample of supervisory-level informants from an international Hong Kong hotel showed that the main motive to implement EMSs was to enhance the reputation and respond to environmental trends instead of saving resources and costs (Chan and Hawkins, 2012) . Moreover, environmental certifications help firms focus on internal supervision of adopted policies and evaluation of their performance, leading to respective improvements (Darnall and Sides, 2008). Adoption of international environmental standards in the hospitality industry can also become a prevailing force in the marketplace to attract good employees by portraying a better image of the company (Chan and Wong, 2006).

Concerning *internal* factors, Carmona-Moreno et al. (2004) and Gil et al. (2001) identified firm size, chain affiliation, and stakeholder pressures as the key drivers of adopting environmental practices by Spanish hotels. Also, Shah (2011) found that foreign ownership, multinationalism, and the firm's past financial performance are important facilitators of the effective environmental practices in the hotel industry. Moreover, business voluntary based values (Dief and Font, 2010), staff training (Chan and Hawkins, 2012), learning orientation (Fraj, Matute and Melero, 2015), and organisational design (Sharma, 2009) found to increase the adoption of hotel environmental management practices. Specific top management characteristics, such as age (Dief and Font, 2010), altruistic/moral behaviour (Garay, Font and Pereira-Moliner, 2017), and the level of environmental education expertise (Rivera and De Leon, 2005), were also revealed to improve environmental practices in the hospitality sector. Specific

organisational resources (e.g., physical, financial, technical, reputational) (Leonidou, Christodoulides, Kyrgidou, and Palihawadana, 2015; Russo and Fouts, 1997) and capabilities (e.g., shared vision, strategic proactivity, technology sensing/response) (Aragón-Correa, Hurtado-Torres, Sharma, and García-Morales, 2008; Leonidou, Leonidou, Fotiadis, and Zeriti, 2013) were also found to contribute to the development of effective hotel environmental practices.

5.2.2 Environmental Strategies

Within the hospitality sustainability literature, two distinct approaches to conceptualise environmental strategies are identified. The first, which reflects the majority of the research undertaken, compile an aggregate of environmental performance based on the eco-friendly practices followed by a firm. For example, (Gil, Jiménez, and Lorente's (2001) study among 262 Spanish hotels measured environmental practices based on budget availability for green issues, employee training, energy and water-saving, and pollution prevention. Carmona-Moreno et al. (2004) analyse environmental strategy in three individual dimensions, based on the extent in which environmental management practices are implemented, the experience of the hotels in applying such practices, and finally the management's perception of proactive environmental management as a potential strategic capability. Oreja-Rodríguez and Armas-Cruz (2012), compose a single measure of environmental performance based on (a) the control of environmental impact; (b) prevention of environmental impact; and (c) environmental communication and training practices. Sharma (2009) focuses on environmental impact reduction practices to create a benchmarking of environmental proactivity in the Canadian hotel industry. The composed index contained both waste-efficiency practices, environmental policies disclosure, and quality assurance policies as indicators of environmental performance. Finally, Claver-Cortés, Molina-Azorín, Pereira-Moliner, and López-Gamero (2007) measured the hotels' environmental practices based on the environmental certificates awarded to them by external bodies.

The second approach, which was adopted by more recent studies, operationalised the firm's environmental sustainability using multiple dimensions based on the nature of environmental strategies. For example, Tan, Habibullah, Tan, and Choon (2017) focused on data on emission reduction, resource reduction, and product innovation as provided by the Reuters Eikon ESG database. Moreover, Iraldo, Testa, Lanzini, and Battaglia (2017), using primary data,

developed multiple measures of environmental performance, such as environmental commitment, resource-saving practices, waste reduction practices, chemical reduction practices, and use of green products, to examine their discrete effects on the competitive performance of Italian food service and hotel industries SMEs. Finally, Kularatne et al. (2019) examined the impact of hotel environmental practices using data envelopment analysis under the pillars of energy efficiency, waste management, and water consumption.

5.2.3 Performance outcomes of environmental strategies

In measuring the performance outcomes of environmental strategies in the hospitality sector, scholars in the field adopted a variety of measures, which mainly centred on various accounting, product, market, customer-based, financial market-and company-related metrics following Katsikeas et al. (2016) suggested categorisation.

With regards to accounting measures, some studies (Gil, Jiménez and Lorente, 2001; Pereira-Moliner *et al.*, 2015) found that environmentally proactive hotels are significantly more profitable than environmentally reactive ones. Moreover, although Claver-Cortés et al. (2007) study among Spanish hotels revealed that environmentally proactive hotels have higher occupancy rate compared to their reactive counterparts, no such association was established in the study of Pereira-Moliner et al., (2015). Moreover, existing literature, (Schubert *et al.*, 2010; Susskind, 2014) also indicate the operational cost reduction benefits of the adoption of eco-friendly policies along with the willingness of consumers to pay an additional premium to cover any additional product cost associated with the eco-friendliness of the establishment. Rivera (2002) identified a positive association between the link of environmental ratings and higher room prices, concluding that such hotels can benefit from an excess price premium when adopting environmental practices on a volunteering basis. Finally, (Fuentes-Moraleda *et al.*, 2019) confirmed that consumers display positive attitudes towards paying an additional premium to stay at a boutique hotel with an environmental management system.

Additional studies cantered their attention to market evaluation performance outcomes of environmental strategies with conflicting results (Albertini, 2013; Flammer, 2013). A number of studies (Ham and Lee, 2011; Inoue and Lee, 2011; Dogru and Sirakaya-Turk, 2016) found negative or no significant relationship between environmental management and the firm's market performance. On the other hand, Tan et al., (2017) found that hotel environmental

practices can boost Tobin's Q as a proxy of financial market performance, while the individual dimensions of resource reduction and product innovation foster long-term success of a company's market financial performance for hotel and restaurant establishments. Similarly, Singal, (2014), found that a firm's credit rating is positively related to the prior period's environmental investment and negatively related to the prior period's environmental concerns. Thus, investment in environmental sustainability and mitigation of concerns in one period had a positive impact on the next period's credit rating. This effect of corporate environmental responsibility on credit rating was much higher for hospitality and tourism firms than for firms in other industries.

Finally, a stream of literature focusing on the effects of environmental strategies directly on consumer-related performance measures is identified. Kassinis and Soteriou (2003) found that increased economic performance is built through a positive impact of environmental performance on customer satisfaction and loyalty on companies' adopting eco-friendly practices. On the same vein, Martínez García de Leaniz, Herrero Crespo, and Gómez López (2018) and Namkung and Jang (2013) found that environmental sustainability strategies improve a business 'corporate image and customer satisfaction (Robinot and Giannelloni, 2010; Peiró-Signes *et al.*, 2014; Su, Hsu and Boostrom, 2020) therefore consumers' purchasing intentions (Prud'homme and Raymond, 2013) along with loyalty (Kim and Hall, 2020; Modica *et al.*, 2020).

Table 5.1: Summarizing the different performance outcomes of existing literature

	Study	Data Sample	Environmental Strategy	Major Findings
1	(Rivera, 2001)	164 Costa Rican Hotels	Voluntary environmental performance	Positive association with higher room prices.
2	(Claver-Cortés *et al.*, 2007)	114 Hotels located in Spain	Aggregate environmental performance	Non-significant results
3	(Pereira-Moliner *et al.*, 2015)	350 hotels located in Spain	Proactive and Reactive Environmental Strategies	Proactive hotels develop cost and differentiation competitive advantage and achieve higher performance levels
4	(Tan *et al.*, 2017)	104 firms in tourism industry	Emissions reduction, resource reduction, product innovation) as percentages.	Resource reduction, and product innovation in hotels improved financial performance
5	(Aboelmaged, 2018)	102 chain hotels (three to five stars) in the UAE.	Environmental orientation	Environmental orientation can directly increase hotel performance.
6	(Ham and Lee, 2011)	53 U.S restaurants	Green Marketing	Non-significant results
7	(Dogru and Sirakaya-Turk, 2016)	15 LEED certified hotels	Adoption of Leadership in Energy and Environmental Design (LEED)-certification	Sustainable investments negatively influence the stock market

5.3 Theoretical background

The study is theoretically anchored on Hart (1995) Natural Resource-based View theoretical paradigm, an extension of the firm's Resource-based View, initially introduced by Barney (1991), to an environmental context. According to this theory, incorporating the natural environment into strategic management can be conceptualised in terms of the following three interrelated strategies: (a) *Product stewardship*. This encompasses the development and management process of a product in a way that has a low life-cycle environmental impact and be easily composted, reused, and recycled. Using this strategy, firms can improve their environmental reputation, gain access to green-sensitive customer segments, charge higher prices for their eco-friendly products, all of which help to increase their profitability. (b) ***Pollution*** *abatement*. This is split in pollution prevention and pollution control. While the former is achieved through a reduction of emissions and effluents, recycling, and process innovation, helping companies to reduce costs, increase productivity and efficiency, and finally

achieve significant savings compared to their competitors; the latter will reduce emissions but will incur high capital expenditures, additional labour cost, and increased operational expenses. (c) ***Sustainable Development***. The term has often been pinpointed as the base of the pyramid and fostered around the social dimension of the NRBV with a particular focus on emerging economies. The 'sustainable development' dimension of NRBV initially incorporated firms' commitment, particularly multinational corporations, in doing business in the 'South' while reducing the environmental burden of such economic activities. In an invited editorial to assess the state of literature using the NRBV, the author points out that research on the link between sustainable development and firm performance is virtually non-existent. This is mainly due to the concept's indefinite nature and the difficulty of defining the term within a business context. Furthermore, the definition is not restricted to environmental concerns but also fosters social and economic concerns (Hart and Dowell, 2011). Since the purpose of this study is beyond a company's social performance, the model will not incorporate the third pillar suggested by the author.

The NRBV was developed with a particular focus on manufacturing companies, and many studies have used it to examine drivers of environment-friendly strategies (e.g., Graham, 2018; Li, Ye, Sheu, and Yang, 2018; Norheim-Hansen, 2018) and/or the performance outcomes of these strategies (e.g., Lun, Lai, Wong, and Cheng, 2015; Vachon and Klassen, 2008; Zhu and Sarkis, 2004). However, this theory could be equally applied, with some modifications to the services sector, and, for the purposes of this study, to firms in the hospitality industry. For example, 'product stewardship' can also incorporate a service element (Tsoulfas and Pappis, 2006), since a large part of the marketing offering of hospitality firms refers to services, such as eco-friendly ambience, design aesthetics, stuff eco-friendly behaviour and innovative service design attributes (Gupta, Dash and Mishra, 2019). Furthermore, Service/ Product stewardship activities of a hospitality firm might cross firm boundaries to incorporate key external stakeholders across the firm's supply chain. The chain affiliation and the multinational nature of the activities the hospitality industry firms are engaged in, require further development of the theoretical, conceptual framework. Since hospitality firms tend to rely on their suppliers to offer high-quality services increasingly, another relevant environmental strategy that could be incorporated to the NRBV theory is that of "Green Procurement" (Feng *et al.*, 2018). Nowadays, strong buyers can shape the environmental strategy of their suppliers; therefore, the environmental responsibility of the firms should escape the boundaries of the firm and spread within its supply chain.

Hart (1995) refers to “pollution abatement” where he distinguishes the terms into pollution prevention and control. However, the conceptual framework he suggests ignores the control of emissions and waste as he believes that such practices are not efficient and should be avoided. That could be partially true; however, waste and emission management practices are a big part of companies within service industries, and technological advancements make such equipment more emission footprint efficient. Furthermore, in the case of the hospitality industry and the broader service sector pollution control through waste and emission management practices are vital activities because of their exposure to single-use materials and resource-intense activities. The pollution control pillar of the framework refers specifically to activities aiming to keep pollution within the required specifications using techniques that treat waste or emissions once they are generated (Gil, Jiménez and Lorente, 2001). In addition, pollution prevention practices are equally applicable in the case of hospitality firms, and this is done through resource efficiencies, such as energy-saving practices for example temperature and light sensor control installations, smart water savings systems or products reuse options depending on the type of the establishment and finally the eco-friendliness of the premises.

5.4 Conceptual model and hypotheses

Drawing upon the evolvement of the NRBV conceptual framework described above, I developed a conceptual framework (Figure 5.1), which underpins the 7 main hypothesised associations between key constructs. The three organisational antecedents are drivers of solid environmental strategies falling under the categories of Service/ Product Stewardship and Pollution Abatement, which subsequently have different impacts on the financial performance of a firm.

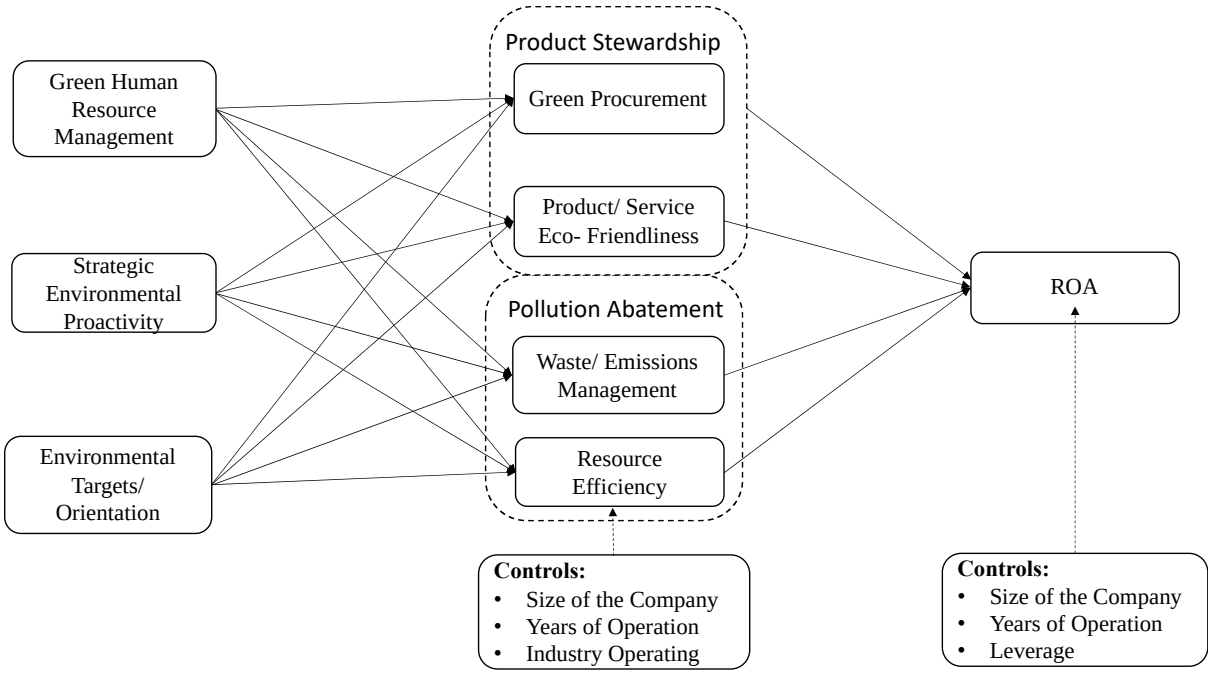

Figure 5.1: The conceptual model (Chapter 5)

5.4.1 Green Human Resource Management and Environmental Strategies

The concept of Green human resource management finds its origins from the impetus of organizations to integrate environmental sustainability practices into the internal environment and decision making (Ren, Tang and Jackson, 2018). Renwick et al. (2013) define GHRM as HRM activities that enhance positive environmental outcomes. Based on the Ability-Motivation-Opportunity theory (Appelbaum *et al.*, 2000), human resource practices provide firms with the required human capabilities that can be translated into a competitive advantage that will lead to enhanced performance outcomes (Yu *et al.*, 2020). The combination of the ability of employees to perform, the motivation through rewards and the opportunity to get engaged can help firms build robust environmental strategies. Existing literature (Renwick, Redman and Maguire, 2013; Haddock-Millar, Sanyal and Müller-Camen, 2016; Jabbour and de Sousa Jabbour, 2016) suggested that green Human Resources Management (HRM) factors such as (top management environmentalism, rewards, training, inadequate supervision) are vital enablers of environmentally friendly practices. Recent studies (Jabbour and de Sousa Jabbour, 2016) have introduced the idea of GHRM bundle practices as they found that the combination of such elements will provide evidence for the combined effects of HRM factors. Top management attitude and perceptions towards an environmental strategy adoption are

acknowledged as fundamental driving forces since main decisions across organisations are facilitated from higher levels. An essential aspect of governance is the compensation rewards affiliated with green incentives. Literature (Berrone and Gomez-Mejia, 2009) found direct links on firms' environmental performance and executive compensation when the compensation was directly linked to environmental performance. When top management deems environmental sustainability as an imperative, it significantly affects their strategic prioritisation.

Decisions such as the configuration of an environmental or sustainability management committee, explicitly responsible for overseeing environmental issues, reflect on the top management's commitment to enhanced environmental management performance (Dixon-Fowler, Ellstrand and Johnson, 2017). Furthermore, given that such committees are not mandated, and they are implemented voluntarily at the firm's discretion, underpins the organisation's green awareness (Kassinis and Vafeas, 2002). Finally, the exclusive responsibility of such committees to oversee and evaluate environmental risks improves environmental performance ownership and, therefore, delivery (Dixon-Fowler, Ellstrand and Johnson, 2017). Besides establishing specialised committees and top management attitude towards environmental sustainability, further research (Daily and Huang, 2001; O'Donohue and Torugsa, 2016) suggested that environmental training is a vital dimension of green human resource management. In particular, employee training could increase awareness of climate change and develop the required skills and knowledge to perform product stewardship and pollution abatement strategies. The latter is true in the case of hotels where Vidal-Salazar et al. (2012) found that environmental training of employees is essential in the development of proactive environmental strategies enhancing the development of environmental knowledge and skills. Empirically, it was found that fundamental attributes of green human resource management can help deploy product stewardship strategies, i.e. green procurement, product service eco-friendliness) (Hart and Dowell, 2011; Leonidou, Katsikeas and Morgan, 2013) and pollution abatement strategies, i.e. waste/ emissions management (May and Flannery, 1995) and resource efficiency (Florida and Davison, 2001). Following Renwick et al., (2013) suggestion to examine GHRM systems as a whole on environmental outcomes to account for the synergistic link of the individual items included in the concept, I examine the impact of GHRM systems on the individual strategies:

Thus, I depot that:

H1a: The hospitality firm's bundle of green human resource management leads to enhanced green procurement

H1b: The hospitality firm's bundle of green human resource management leads to enhanced product/ service eco-friendliness

H1c: The hospitality firm's bundle of green human resource management leads to enhanced waste/ emissions management

H1d: The hospitality firm's bundle of green human resource management leads to enhanced resource efficiency

5.4.2 Environmental Proactivity and Environmental Strategies

Strategic attitude refers to the way in which the company reacts or proacts to market stimuli and is considered a crucial component that can define the company's environmental strategy (Azzone *et al.*, 1997). Reactive firms simply comply with relevant regulations as they are mandated. On the other hand, companies with a proactive stance tend to be more alert to tackling potential threats before obliged (Lin and Ho, 2016). Strategic proactivity is defined as a firm's tendency to initiate changes rather than react to events. Therefore, environmental strategic proactivity refers to implementing voluntary environmental practices and actions to reflect the company's commitment towards the environment (Aragon-correa, 1998; Mu, 2010). A chronic proactive stance over climate change helps the firm better understand the foreseen and unforeseen risks. Environmentally proactive companies have embedded routines and processes that allow them to maintain a strategic green leadership as they find themselves a step ahead of their competitors, particularly in turbulent environments. By being proactive, firms can sense and capitalise on new opportunities, facilitate a quick reaction in case of an unpredicted crisis, and reduce uncertainty in decision-making processes (Sharma, Aragón-Correa and Rueda-Manzanares, 2007).

Firms characterised by an increased strategic proactivity capability pre-emptively deploy financial resources to reduce future risks and increase future opportunities. The capitalization

of such resources proactively invested can lead to increased pollution prevention and abatement strategies. Additionally, proactive firms tend to form strategic alliances with specialized environmental partners such as NGOs, industry organizations, governmental or supra-governmental organizations focusing on improving environmental issues. Such collaborations can provide access to exclusive knowledge accumulated by those organizations (Mu, 2010) to assist the firm adopt effective environmental management practices. Furthermore, firms can benefit from collaborations with governmental agencies and industry associations to take advantage of available subsidies, get informed of forthcoming regulations or even lobby regulations in their benefit. Beyond the formulation of partnerships, environmentally proactive firms tend to adopt environmental management systems (Bansal and Hunter, 2003). Established environmental management systems help organizations to develop the traits required to identify, manage, monitor, prevent and control environmental issues in an integrated, holistic manner. The International Organization for Standardization, as the most recognized international certification system provider, described its current revision of ISO 14001 as strongly committed to proactive initiatives aiming to boost environmental performance (ISO, 2015). The standard provides increased prominence of strategic planning processes that can increase both pollution prevention and abatement practices. Empirically, it was found that a firm's strategic environmental proactivity attributes can utilize product stewardship strategies and pollution abatement strategies (Aragon-correa, 1998; Bowen *et al.*, 2009).

Thus, I argue that:

H2a: The hospitality firm’s strategic environmental proactivity leads to enhanced green procurement

H2b: The hospitality firm’s strategic environmental proactivity leads to enhanced product/ service eco-friendliness

H2c: The hospitality firm’s strategic environmental proactivity leads to enhanced waste/ emissions management

H2d: The hospitality firm’s strategic environmental proactivity leads to enhanced resource efficiency

5.4.3 Environmental Targeting/ Orientation and Environmental strategies

Setting specific environmental targets and goals is a practice established mostly in the macro-levels of the economy. The Paris agreement goal for limiting global warming below 2^{o}C, the 2030 climate and energy framework of the European Union along with the national goals set by the state members and the UN sustainable development goals are some examples to mention. The interdependencies among various goals imply an inclusive approach for successful implementation (Ferro *et al.*, 2019). Those targets can be voluntary or mandatory, and motivation can be offered either through penalties or rewards.

Previous literature on corporate financial performance showed that managers respond better when they have to meet specific targets (Jabbour *et al.*, 2015; Maas, 2018). The commitment to specific environmental targets can improve the environmental performance of a company. For this study, environmental targeting/ orientation is defined as the commitment of a company to reach certain quantified targets demonstrating an eco-friendly orientation of the firm. An established target can indicate an eco-friendly orientation of the firm, which is linked to routine actions for green practices (Jabbour et al., 2015). At the micro-economy level, the commitment to specific environmental targets can improve a company's environmental performance. Companies can develop evaluation systems to create a target setting which can facilitate the adoption of environmental management practices. Once targets are quantified managers can work towards definite directions and provide incentives to achieve the proposed goals, thus boosting employee's commitment. Sharing specific environmental targets across employees (Harvey, Williams and Probert, 2013) creates determination and a sense of enforcement to increase their efforts to achieve the established targets (Anwar *et al.*, 2020).

Similarly, it can assure individual department contributions can be regularly reviewed and accessed through qualitative and quantitative measures of the firm's environmental progress (Ramus, 2002). The assessment can be assigned to individual groups and departments for more efficient monitoring and feedback provision (Boiral, 2009). The provision of regular feedback can lead to the successful implementation of environmental practices and improvement of financial performance (Carrico and Riemer, 2011). Reporting environmental targets can sustain motivation and boost determination toward an eco-friendly strategy (Pinzone, Lettieri and Masella, 2011). Assuming that green performance is measured through a specific targeted

environmental attitude rather than a blurred one (Subramanian et al., 2016), firms can achieve increased product stewardship and pollution abatement strategies.

Thus, I argue that:

H3a: The hospitality firm's environmental targeting/orientation leads to enhanced green procurement

H3b: The hospitality firm's environmental targeting/orientation leads to enhanced product/ service eco-friendliness

H3c: The hospitality firm's environmental targeting/orientation leads to enhanced waste/ emissions management

H3d: The hospitality firm's environmental targeting/orientation leads to enhanced resource efficiency

5.4.4 Product Stewardship Strategies and Financial Performance

Hart (1995) proposed that product stewardship will increasingly be a source of competitive advantage in terms of cost reduction and differentiation, thus implying a positive relationship with financial performance and calling for future research to examine the relationship further. Since then research findings on the effects of corporate environmental practices on firms' economic performance have been contradictory (Wagner *et al.*, 2002). While the vast majority of the studies indicate a positive relationship between product stewardship and financial performance some studies are indicating a negative relationship when the strategies were narrowed down to a firm's specific activities (Cordeiro and Sarkis, 1997). The varying results can be attributed to the way the data are utilized, the context of the studies and mainly on the term's conceptualisation. For the purpose of this study, product stewardship is operationalized into two different dimensions, namely 1) Green Procurement 2) Product Service Eco-friendliness.

Advances in sustainability strategy literature and pressures from stakeholders for an eco-friendly attitude from companies raised the attention on the eco-friendliness of firm's supply

chain, in other words, the green procurement strategy of the company (Feng *et al.*, 2018). Companies operating under multiple chain outlets are more likely to receive greater attention from various stakeholders; therefore, their commitment to the environment should not be restricted in their own product/ service eco-friendliness strategy but should be expanded to that of their suppliers. For the purpose of this study, green procurement is a distinct construct that refers to the environmental criteria used by a firm to source its materials, select its suppliers or sourcing partners and its efforts to lessen the environmental impact of its supply chain. Firms can benefit from external collaboration with partners and suppliers by jointly established goals and shared planning to improve their environmental performance (Yang *et al.*, 2013; Gotschol, De Giovanni and Vinzi, 2014). On the other hand, green purchasing increases cost (Pulido-Fernández, Andrades-Caldito and Sánchez-Rivero, 2015) and investing in a green procurement strategy may not deliver financial gain especially in the short term (Carlsen, Getz and Ali-Knight, 2001). Higher costs can be due to resources spent on the identification of eco-friendly suppliers, their evaluation and investment in monitoring their compliance with sustainability requirements (Chkanikova, 2016). In the case of large hospitality multinational firms, their business models are based on economies of scale to leverage cost reductions from suppliers. Introducing environmental criteria into their sourcing requirements can shift the emphasis and sometimes lessen their capacity to achieve mass cost reductions. These higher costs are difficult to counterbalance by increasing the customer base as the nature of green procurement practices is more difficult to be marketed and is not directly visible to the customer at the service sector (Styles, Schoenberger and Galvez-Martos, 2012). The increase in the related cost from following a green procurement strategy and the difficulties to embedded green procurement into the marketing communications strategy of a firm, thus not significantly increasing sales, has a result the decrease of a firm's net income and therefore a reduced financial performance.

Therefore, I argue that:

H4: The hospitality firm's green practice related to green procurement leads to reduced financial performance.

Product/ service eco-friendliness is sourced from the items on environmental products, product impact minimization, policy for sustainable packaging and product responsibility monitoring (Appendix 3.1). Firms marketing their eco-friendly product and service can improve their environmental image and enlarge their customer base as research (Bougherara and Combris,

2009) found that consumers are willing to pay a premium for eco-friendly products. In the hospitality industry, eco-friendly product or service practices that are visible to consumers can positively influence the consumers' overall perception and satisfaction thus increasing the firms' financial performance (Galeazzo, Ortiz-de-Mandojana and Delgado-Ceballos, 2020). The integration of a product stewardship strategy with corporate strategic issues can reduce risk, enjoy investors trust and increase eco-innovation levels and profitability. Firms implementing eco-friendly practices can have easier access to financial aid programmes supported by governments, improve their public image and get ahead of the competition by sensing new markets and possible opportunities. In that sense, firms communicating an eco-friendly product/ service to their consumers can directly increase their sales, thus their net income which will increase their financial performance as measured by ROA.

Therefore, I argue that:

H5: The hospitality firm's green practice related to product/ service eco-friendliness leads to enhanced financial performance.

5.4.5 Pollution Abatement Strategies and Financial Performance

Hart (1995) refers to "pollution abatement" which he breaks down to pollution prevention and control. Pollution prevention practices refer to the prevention of pollution before it takes place where pollution control practices aimed at reducing pollution after it has been produced, for example, the installation of emission filters and waste preparation and separation practices (González-Benito and González-Benito, 2005). This study will empirically test both pollution abatement dimensions through resource efficiency as an indicator of pollution prevention and waste emissions management as a mean of a pollution control strategy.

Within the conceptualization of the NRBV of the firm theory, the pollution control strategies are marginalized as it is argued that such practices do not improve financial performance and should be avoided. That could be partially true; however, waste and emission management practices are a large part of companies' operations within service industries, and new technologies allow for significant emissions reduction. Their effect of end-of-pipe pollution control strategies on financial performance is challenged throughout the literature (Bergmann et al., 2017; Sarkis and Cordeiro, 2001). Environmental practices such as the installation of

emission filters and waste treatment are controversial with the operational objectives of a firm such as cost, speed, operational flexibility and financial efficiency. This can be explained since such practices in the hospitality industry require the incorporation of additional operations, processes, human resource capital, and specific labour skills and expertise that can increase the operational cost of a firm significantly (Gil, Jiménez and Lorente, 2001).

Additionally, the implementation of such practices, often driven by regulation, requires high capital investment and technological resources, thus increasing the burden of capital cost. The deployment of valuable financial, technological and human resources to the implementation of environmental management practices may lead to reduced availability of resources for marketing purposes. Practices refereeing to waste emissions management are not easy to be marketed since they are not directly visible to environmentally aware consumers affecting negatively financial performance, especially in the short term. Therefore, the substantial increase in the capital and operational cost of a firm, along with the difficulty to communicate a waste/ emissions management strategy to the consumers results to a reduced financial performance.

In line with (Klassen and Whybark, 1999), I hypothesize that:

H6: The hospitality firm’s green practice related to waste/ emissions management lead to reduced financial performance.

In contrast to managing pollution, preventing pollution before it occurs first can be mainly achieved through a resource efficiency strategy aiming to reduce the natural resources used for the operation of a firm. The aforementioned strategy can directly be accommodated within the service industry context, especially in terms of resource efficiency policies and reduction of the resources used by the firm (Hart and Dowell, 2011). It incorporates only operations performed within the hospitality firm's internal environment (Maas, Schuster and Hartmann, 2014). Environmental protection activities related to improving resource efficiency can benefit from significant operational cost reduction (Gil, Jiménez and Lorente, 2001). The latter can be more profound in the hospitality sector since utility bills are one of their most significant expenditure burdens. According to the Trends in the Hotel industry 2015 (Mandelbaum, 2015) utility expenditure represented 3.6 percent of the total hotel revenues from which 60 percent were billed on electricity, 23.8 percent for water/services, 10.6 percent for gas/fuel and 2.3

percent for steam. Hospitality firms reducing pollutants' emission from their processes can increase operational efficiency since they reduce the inputs required, simplifying processes and reduce compliance and liability costs. Lastly, reducing the pollution caused to the environment through efficiency measures can help the company avoid fines while benefitting from eco-friendly financial aid programmes.

In line with extant literature (Gil, Jiménez and Lorente, 2001), I hypothesize that:

H7: The hospitality firm's green practice related to resource efficiency leads to enhanced financial performance.

5.5 Analysis and results

5.5.1 Preliminary analysis

The data analysis was based on multiple regressions and carried out using both STATA and SPSS statistical software to cross-validate the results. Normality and linearity assumptions were assessed by examining appropriate plots for each assumption, such as residual and scatter plots between independent and dependent variables for linearity and residual histograms. Normality was tested using Normal Q-Q Plots and d'Agostino-Pearson test, which was found to be insignificant for all dependent variables at the level of .05, ensuring the normality of the dependent variables.

To check for the assumption of heteroscedasticity, both Breush- Pagan Test and Koenker tests are employed (Breusch and Pagan, 1979; Koenker and Bassett Jr, 1982) which indicate a homoscedasticity issue when associate chi-square values have a significant result. The models tested (i.e. ROA) found to be insignificant, confirming the assumption of homoscedasticity was not violated. Outliers were subsequently detected by using scatter plots and obtaining studentized residuals. For each of the three different regression models of the ESP-CFP link, an observation was deleted if its studentized residual's absolute value exceeded 3.29 following Tabachnick and Fidell (2006) recommendation.

In order to examine the link between environmental, organizational drivers and Environmental Strategy Performance, both OLS hierarchical regression and ordered logistic regression

analysis are used to increase results' robustness and confirm consistency due to the heretical treatment of similar data in the wider literature. For the analysis in the study's main body, OLS hierarchical regression was used as a methodological enterprise. This method is being adopted widely in management and marketing research to examine antecedents and outcomes of various phenomena due to its simplicity in interpreting the results. In contrast with other types of regression models, hierarchical regression is favourably suited for testing theory-driven relations among multiple predictors and a dependent variable. The nature of the analysis allows us to identify the incremental increase of the model predictability when the examined variables are added in the model by calculating the additional amount of variance explained compared with running the model with the control variables alone.

5.5.2 Descriptive Statistics and Correlation Matrix

Table 5.2:Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Green Human Resource Management	116	0	1	0.21	0.29
Environmental Proactiveness	116	0	1	0.15	0.2
Environmental Orientation	116	0	1	0.22	0.36
Green Procurement	116	0	1	0.32	0.43
Product/ Service Eco-Friendliness	116	0	1	0.15	0.24
Waste/Emissions Management	116	0	1	0.35	0.35
Resource Efficiency	116	0	1	0.51	0.39
Return on Assets	116	-0.09	.27	0.08	0.06
Revenues	116	4.97	2289.4	275.24	400
Firms Age*	116	3.00	131	26.88	23.38
Leverage %	116	-9.53	10.18	.65	2.7

*Firm Age and Revenues are presented in their actual values for comparison reasons, although they have been transformed for analysis purposes.

*Revenues are divided by 10^(7).

Table 5.2 illustrates a summary of the examined variables' descriptive statistics (environmental governance capabilities, environmental strategy performance and corporate financial performance metrics along with the control variables used in previous literature).

Environmental governance capabilities and performance can take values ranging from 0 - 1 since their scores are treated as the average value of the total sum of the related policies or practices implemented by the company. Environmental Proactiveness receives the least attention (mean value 0.15) in contrast to Environmental Orientation which is the capability more widely developed in the recreational industry with a mean value of 0.22 although its higher standard deviation indicates that there is a wide spread of the data around the mean. On the other hand, environmental proactiveness data are more concentrated around their mean value. Among the environmental strategies, Resource Efficiency is the most popular, with a mean of 0.5. It appears that the least adopted strategy is the Product / Service Eco-Friendliness with a mean of just 0.15.

Table 5.3: Correlation Matrix

		1	2	3	4	5	6	7	8
1	GHRM								
2	Environmental Proactiveness	.488**							
3	Environmental Orientation	.516**	.419**						
4	Green Procurement	.527**	.609**	.505**					
5	Product/ Service Eco-Friendliness	.319**	.389**	.235*	.529**				
6	Waste/Emissions Management	.596**	.624**	.489**	.509**	.361**			
7	Resource Efficiency	.642**	.599**	.531**	.593**	.450**	.783**		
8	Return on Assets	-.049	-.008	.014	.002	.222*	-.044	.118	

Note: Unstandardized Coefficients are reported *p<0.1, **p<0.05

A significantly high correlation between Resource Efficiency and Waste Emissions management strategies is noticed. Purposely, multi-collinearity is tested using the Variance Inflation Factor (VIF). The multi-collinearity tests generated VIFs for all independent variables below 3.2. The results demonstrate avoidance of multi-collinearity problems as the values above were below the typical cutoff of 10 and even the more conservative threshold of 3.3 (Kock, Lynn and Kock, N. and Lynn, 2012). Additionally, a Durbin Watson test is performed to detect the presence of autocorrelation in residuals for each of the five dependent variables regression analysis with values ranging from 1.57 to -2.03 (Savin and White, 1977). Therefore, both high correlated constructs are kept in the model as, although they are sourced from the

same organizational drivers, they have different effects on a firm's financial performance due to the nature of practices involved in each one.

5.5.3 Results and Discussion

Table 5.4 Results of Corporate Governance – Green Procurement and Product Service Eco-Friendliness Performance Metrics

Constructs	Green Procurement			Product Service Eco-Friendliness		
	Model 1	Model 2	VIF	Model 1	Model 2	VIF
Constant	-2.3**	-.888		-.966**	-.276	
Control Variables						
Type of Business	-.176**	-.016	1.137	.038	.1**	1.137
Revenues (Log)	.132**	.047*	1.299	.046**	.006	1.299
Firm Age (Log)	.054	.001	1.084	.029	.007	1.084
Main Effect						
GHRM		.276**	1.680		.168*	1.680
Environmental Proactiveness		.826**	1.646		.402**	1.646
Environmental Targeting/ Orientation		.273**	1.470		.032	1.470
Fit Statistics						
R^2	.215	.516		.065	.239	
R^2 Diff		.3			.173	
F-Model	9.511**	17.917**		2.422*	5.273**	
Durbin Watson		1.9			1.774	

Note: Unstandardized Coefficients are reported *p<0.1, **p<0.05

Table 5.5: Results of Corporate Governance – Waste / Emissions Management and Resource Efficiency Performance metrics

Constructs	Waste/ Emissions Management			Resource Efficiency		
	Model 1	Model 2	VIF	Model 1	Model 2	VIF
Constant	-2.192**	-1.049**		-2.62**	-1.459**	
Control Variables						
Type of Business	-.177**	-.056	1.137	-.186**	-.044	1.137
Revenues (Log)	.123**	.054**	1.299	.148**	.075**	1.299
Firm Age (Log)	.084**	.053**	1.084	.111**	.084**	1.084
Main Effect						
GHRM		.383**	1.680		.489**	1.680
Environmental Proactiveness		.525**	1.646		.393**	1.646
Environmental Targets/ Orientation		.148*	1.470		.217**	1.470

Fit Statistics				
R^2	.328	.604	.361	.654
R^2 Diff		.276		.293
F-Model	16.913**	25.646**	19.6**	31.791**
Durbin Watson		1.958		1.664

**Note: Unstandardized Coefficients are reported *p<0.1, **p<0.05

Table 5.5 shows the regression analysis results to describe the link between the different Organisational Drivers and the Environmental Strategy performance, which can provide firms with a competitive advantage. Firstly, only control variables, already examined by the existing literature (Model 1) were included, followed by the full model (Model 2), which incorporates all explanatory variables under consideration.

5.5.3.1 Model Variance and Control Variables

The analysis revealed that the addition of the independent variables increases the variation of Green Procurement by an additional 30%. The model, including the control variables, explains 51.6% of the Green Procurement variance. The control variables alone are responsible for 21.5% of the model's R^2 and there is sufficient evidence to support the association of company's size (β=.047, t = 1.709, p<0.1) with Green Procurement strategies under OLS hierarchical regression analysis. Large firms appeared to have a friendlier environmental supply chain than smaller size firms. This is not surprising as large firms tend to be large buyers and as a result, they command significant power on their suppliers. In this way, they can encourage their suppliers to become more environmentally friendly to maintain their commercial relationship (Chkanikova, 2016).

The model explaining the Product/Service Eco-Friendliness strategy performance appears to explain the least variance compared with the rest of the environmental performance strategies. The model explains 19.3% of the Product/Service Eco-Friendliness variance. Among the control variables business type (β=.1, t = 2.077, p<0.05) affects the Product/Service Eco-Friendliness strategy. Restaurants and other leisure establishments seem to be more conscious of offering a greener service or product to their consumers. That can be explained by the nature of these companies as they are more exposed to product-related policies.

A significantly large proportion of the Waste/Emissions management strategies variance is interpreted by the environmental and organisational antecedents examined in the analysis. The independent variables explain an additional 27.6% of the Waste/Emissions Management variance compared with the associate model examining the effects of the control variables themselves. It is confirmed that the control variables of operation years (β=.053, t= 1.907, p<0.1) and company size, measured by generated revenue (β=.054, t= 2.709, p<0.01), can enhance the recreational firms' Waste/Emissions strategy. Larger companies seem to be able to develop certain practices more easily compared to smaller ones as well as more mature companies might have developed internal competencies and certain routines which help them develop practices for reducing both their emissions and waste. The results referring to the main independent variables are identical when they are accessed with an ordinal regression analysis where significance levels are even higher for the link between environmental orientation and Waste/Emissions management strategy.

The environmental, organisational drivers increased the overall variance of the model by 29%. As expected, the same control variables, as with the Waste/Emissions management strategies, have a positive effect on Resource Efficiency strategies. Both Waste/Emissions and Resource Efficiency strategies were found to be enhanced in large and mature firms as size (β=.075, t = 3.52, p<0.01) and organisation age (β=.084, t = 2.896, p<0.01) provided further support of the results.

5.5.3.2 Main Results

The results offer broad support of Hypothesis H1a-d. Specifically, the bundle of Green Human resources management is strongly related to the deployment of a Green Procurement (β=.276, t = 2.091, p<0.05), Product/ Service Eco-Friendliness (β=.168, t = 1.831, p<0.1), Waste/ Emissions Management (β=.383, t=3.988, p<0.01), and Resource Efficiency (β=.489, t = 4.824, p<0.01) strategies. Specifically, the study confirmed the vital role of the firm's ability to develop substantial green human resources deploying eco-friendly strategies. In the study research context, hospitality firms sharing a bundle of green human resources and capabilities can showcase a stronger environmental strategy. Decisions on expenditures for technology-intensive strategies like resource efficiency and waste emissions strategies are decided at the top levels of the company's governance hierarchy. Similarly, the purchasing and product service eco-friendliness strategies decisions are shaped from top managers, and incentives like

environmental-performance linked compensations are vital enablers of eco-friendly strategies (Bowen *et al.*, 2009; Leonidou, Katsikeas and Morgan, 2013). Furthermore, practices such as training employees are vital in the implementation of waste/ emissions and product service eco-friendliness strategies in the hospitality industry since they require a high level of knowledge and expertise (Kasim *et al.*, 2014). The results are in harmony with previous literature as it is confirmed that Green Human Resource Management is a facilitator of Green Procurement (Bowen *et al.*, 2009), Product/ Service Eco-Friendliness (Leonidou, Katsikeas and Morgan, 2013) Waste/ Emissions Management (May and Flannery, 1995) and Resource Efficiency (Florida and Davison, 2001) strategies.

In regard to hospitality firms' strategic proactivity, the results offer broad support for H2a-2d. Specifically strategic environmental proactivity of a firm is found to positively related to the adoption of Green Procurement (β=.826, t= 4.25, p< 0.01), Product/ Service Eco-Friendliness (β=.402, t=2.975, p<0.01) Waste/ Emissions Management (β=.525, t=3.715, p<0.01) and Resource Efficiency (β=.393, t=2.639, p<0.01) strategies. The results indicate that firms taking a proactive posture toward climate risks are inclined to adopt further environmental strategies. Environmental proactivity in hospitality firms can facilitate the exploration for eco-friendly products while integrating environmental criteria on the selection of their suppliers. Proactive firms are better prepared towards unforeseen crises, and disruptions as they precautionary establish systems and synergies. Beyond product stewardship hospitality firms fostering a proactive capability can deploy strategies for pollution abatement. These can provide them with significant competitive advantage against their industry peers as they are less prone to stringent environmental regulations associated with a firm's pollution levels. The results are in line with previous research highlighting the importance of environmental proactivity in facilitating Product Stewardship (Lin and Ho, 2016) and Pollution Abatement (Aragon-correa, 1998) strategies.

Finally, the results also offer broad support for H3a, H3c, H3d. Specifically, strategic environmental targeting/orientation of hospitality firms found to positively influence the adoption of Green Procurement (β=.273, t= 2.975, p< 0.01), Waste/ Emissions Management (β=.127, t=1.729, p<0.1) and Resource Efficiency (β=.217, t = 2.805, p<0.01) strategies. The integration of related goals into corporate environmental strategies is a valid measure for firms to facilitate and shape their eco-friendly strategies (Seuring and Müller, 2008). Hospitality firms setting specific targets manage to enhance their pollution abatement strategies referring

to waste/ emissions management and resource efficiency. In the same vein, they manage to increase their green purchasing orientation dimension of product stewardship. This can be attributed to the measurable nature of the targets as managers can provide certain directions on the aforementioned strategies that can be implemented by the associated employees. Strategies referring to Green procurement, Waste/Emissions management and Resources efficiency can numerically be measured through quantitative metrics, and a publicly available target can engage employees and managers further to accomplish that target.

However, I did not find sufficient evidence to support H3 (b) referring to whether Environmental Targeting/ Orientation (β=.032, t=.463, p>0.1) can enhance Product/Service Eco-Friendliness although a positive coefficient describes the relationship between them. This can be attributed to the difficulty of defining clear goals on the eco-friendliness of a product or service. In contrast with green procurement, resource efficiency and waste/ emissions management strategies, hospitality firms find it challenging to quantify the eco-friendliness of their services.

The size effect of the coefficients of the examined relationships indicate that environmental proactivity has the most important role on deploying 1) Green procurement 2) Product Service Eco-friendliness and a 3) Waste emissions management strategies as it is found to have a higher size effect compared with Green human resource management and even more with environmental targeting/ orientation. Furthermore, 'Green human resource management' found to have a leading role in deploying a 'Resource efficiency strategy'.

In relation to the strategies with a positive effect on financial performance, product/service eco-friendliness was found to have a greater effect on financial performance than resource efficiency. On the other hand, among the strategies negatively affecting a firm's financial performance, waste/ emissions management was found to have a greater negative effect than green procurement.

Environmental Strategies Performance and Return on Assets

Model Variance and Control Variables

Table 5.6 shows the hierarchical regression analysis (HLM) results performed to examine the link between the multiple dimensions of environmental strategy performance and corporate financial performance. Model 1 represents the analysis using only the control variables, and Model 2 represents the analysis, including the different strategies implemented. The control variables alone explained 19.4% of the model, where the addition of the four different dimensions of the environmental strategy performance predicts 31.3% of ROA's variance. It is also confirmed that exposure to high leverage (β= -.977, t=-4.274, p<0.01) leads to decreased ROA financial performance.

Among the four strategies examined Product/Service Eco-Friendliness (β= .072, t=2.535, p<0.05) and Resource Efficiency (β= .058, t=2.061, p<0.05) improved the Return on Assets financial performance of the firms. The proposed negative link between Green Procurement (β=-.037, t=-2.01, p<0.05) and Waste/Emissions Management (β= -.058, t=-2.061, p<0.05) strategies and ROA was also confirmed providing sufficient evidence to support hypotheses H7 (a) and (d).

Table 5.6: Results on Environmental Strategy Performance – Financial Performance

Construct	ROA		VIF (Model2
	Model 1	**Model 2**	
Constant	-.103	-.154	
Control Variables			
Revenues (Log)	.008	.01	1.646
Leverage	-.01**	-.01**	1.101
Firm Age	.007	.005	1.202
Main Effect			
Green Procurement		-.037**	1.859
Product Service Eco-Friendliness		.072**	1.436
Waste Emissions Management		-.061**	2.567
Resource Efficiency		.058**	3.162
Fit Statistics			
R^2	.194	.313	
R^2 Change		.119	
F-model	6.68**	5.148**	
Durbin Watson		1.566	

Main Effects

Product Stewardship Strategies

Among the Product stewardship strategies, Product/Service Eco-Friendliness was found to have a positive effect on financial performance ($\beta = .072$, $t=2.535$, $p<0.05$) while Green Procurement ($\beta=-.037$, $t=-2.01$, $p<0.05$) was found to negatively influence financial performance providing sufficient evidence to support hypotheses H4 and H5.

Specifically, the financial performance of hospitality firms implementing a green procurement strategy was found to worsen. This is because there is often a price premium for environmentally friendly products. A hospitality firm can market their green procurement to attract more environmentally conscious customers but doing so is not straightforward or immediately effective. Furthermore, as ROA is a short-term financial performance metric, incorporating mostly the firm's financial, operational efficiency, the effects of a green procurement strategy might not be captured adequately. In fact, it could be different in the long term, especially on market evaluation performance metrics.

On the other hand, the eco-friendliness of a hospitality firm's products and services is found to have a positive effect on corporate financial performance. Hospitality firms able to brand their eco-friendly services have access to financial aid associated with subsidies or green loans, under better conditions, thus reducing their operating cost. Furthermore, greening services and products can benefit hospitality firms by widening their customer base, allowing them to charge higher prices and improve their customer satisfaction.

Pollution Abatement Strategy

Regarding pollution abatement strategies, Waste/Emissions Management ($\beta = -.061$, $t=-2.761$, $p<0.05$) confirmed the proposed negative relationship while Resource Efficiency strategies ($\beta = .058$, $t=2.061$, $p<0.05$) were found to improve the firm's financial performance, as hypothesized. The results provide sufficient evidence to support hypotheses H6 and H7.

In particular, the results confirm the negative effects of pollution control strategies such as Waste/ Emissions Management on financial performance in contrast to the benefits of resource

efficiency strategy. Pollution control strategies require significant capital which is deducted over several years and not in the year the investment occurred. The hospitality industry is capital intensive and as such additional investment in end-of-pipe pollution control affects the firms' financial position. Waste emissions management strategies beside a considerable amount of financial resources they require human resources capable of deploying such practices depriving them from other functions of the company. In contrast, hospitality firms deploying strategies related to efficiency and resource reduction practices can strengthen their financial position. Hospitality firms can drastically reduce the burden of their utility bills either by improving their energy and water systems' efficiency or reducing the resources used. Greater efficiency can be achieved mainly by investing in renewable energy technologies, smart, eco-friendly buildings, installation of appropriate sensors and high-efficiency appliances. Additional by making consumers aware of climate change risks, they can reduce their water and energy use while not affecting their customer satisfaction levels. In addition, hospitality firms reducing their pollution levels can avoid regulatory fines, thus further reducing their operational efficiency and their financial performance. The results are in line with (Klassen and Whybark, 1999) findings that firms can financially benefit from pollution prevention strategies but face significant loses from pollution control strategies.

5.5.3.3 Additional Analysis

As a robustness check, multiple rival models were estimated in which alternative and additional control variables of environmental strategies suggested in the extant literature were included such as the number of employees instead of revenues for capturing company size. The alternative methodological approach of ordered logit regression based on maximum likelihood estimation was also used to examine the link between organisational drivers and environmental strategies dimensions performance. The direct effects of the main variables examined are robust in this alternative model. In order to maintain a sufficient sample size to variables examined ratio, to allow us to test the main effects independent variables simultaneously, these additional controls were not included in the final hypothesis testing model. Moreover, rival models examining the effect of corporate environmental strategies on the company’s financial performance (Appendix 3) were developed using Return on Invested Capital and Return on Invested Capital/ Weighted Average Cost of Capital metrics. The findings showed the same trends as the main results providing proof of their robustness.

The analysis was replicated using an ordinal regression model for the examination of organizational drivers and environmental strategies. However, the results referring to the effects of organizational drivers on product/ service eco-friendliness and resource efficiency should be treated with caution since the proportional odds assumption, which is the main assumption for order logit models, did not hold. Therefore, the analysis was undertaken using a less restrictive model. The findings using the alternative methodology are identical with the results presented in the main text.

5.6 Theoretical, Managerial and Policy-makers Implications

The study findings have important theoretical implications. Internal organizational drivers are treated as antecedents that can transform the firm's competencies into valuable, sustainable strategies, which will eventually lead to superior organisational financial performance. In that manner, the Natural Resource-based View (NRBV) theory is applied, initially developed to explain manufacturing firms' environmental behaviour, within the hospitality sector by taking into consideration its idiosyncratic attributes. The study complements the existing theory by incorporating the 'Service' element into the product-eco friendliness dimension of the existing framework. The proposed adjusted dimension extends the scope and applicability of the theory from firms offering products solely to firms that can also offer services that can be evaluated on their greenness and have a positive outcome on firms' financial performance. Moving forward, the study extends the dimension of hospitality firms' Service/Product stewardship activities to include 'Green Procurement' as an independent sub-dimension of the Service/ Product stewardship of the firms. The new dimension accounts for the power dynamics large multinationals can have on their suppliers. Nowadays, wealthy buyers can shape the environmental strategy of their suppliers; however, the study indicated that it comes at a cost. Finally, the theoretical framework further complements the "pollution abatement" dimension by incorporating waste emission practices as part of the strategy. The proposed dimension will provide future research to account for activities aiming to keep pollution within the required specifications using techniques that treat waste or emissions once they are generated. Finally, in response to Hart and Dowell (2011) call for further research on factors driving the development of environmental strategies, when revising the research done under the lenses of the NRBV, I examine the launch of specific quantitative targets as an instrument for adopting the strategies proposed under the theoretical framework.

Managerially, the study points to the fact that firms in the hospitality sector should set up corporate governance mechanisms, which will facilitate the development of sound sustainable practices. Most importantly, firms should take into consideration that investing in different sustainability programs will yield different performance results opening possibilities for fine-tuning sustainability governance. Firms should draw on the Ability-Motivation-Opportunity perspective to set the proper mechanisms of Green human resources management as it can boost the adoption of eco-friendly strategies. That can be achieved by providing the required training regularly, creating incentives through awarding schemes, and encouraging employee engagement on sustainability matters. Moreover, hospitality managers should maintain a proactive stance toward environmental issues by collaborating with governmental and non-governmental bodies, investing proactively to reduce future risks and increase opportunities and obtain environmental management certifications, such as ISO 14000, to standardize and embed a green culture within the organization. Practically, building on small reasonable targets for each different dimension of strategy can be helpful, allowing for incremental successes and maintaining employees' focus towards a particular direction. It is noteworthy that practices that are easier to communicate to the consumers have a direct positive effect on financial performance; thus, greater effort should be put on making customers aware of green procurement strategies. Hospitality managers should shift their attention to implementing more resource efficiency strategies to prevent pollution in the first instance rather than relying on costly pollution control strategies to improve their firm's environmental and financial performance.

In addition to managers, this study provides certain directions for policymakers as one of the decisive actors in corporate environmental management strategies formulation in the hospitality sector and the broader economy. Targeted government support should be given to removing barriers to the implementation of eco-friendly strategies. For example, such incentives could be provided in the form of tax credits or subsidies to support and reward firms' engagement in sustainability strategies. Institutional reforms should encourage the adoption of environmental management systems such as ISO 14000 or EMAS, educational programs to equip employees with the necessary environmental skills, knowledge, and rewards and recognition for the leaders on eco-friendly practices. Finally, lenders should tie capital costs to green performance metrics where eco-friendly companies can benefit from lower interest rates.

5.7 Limitations

Similar to other research, the study is not free from limitations which are identified in four main aspects, all of which relate to data availability. Firstly, even though the sample size and industry coverage have been satisfactory, the study could benefit from a larger sample, including smaller companies, which are not part of the large chains. Secondly, although the study interprets the data with a time lag of two years between the different dimensions of environmental strategy performance and financial performance, concerns on reverse causality are not entirely eliminated. That is because a company might report a particular strategy on a specific date, but there is no certainty over the exact time at which that strategy is initiated within the organisation.

Furthermore, since the study sample consists of chains that operate through several individual establishments, the findings rely on the assumption that the headquarters company's strategies are adopted and implemented uniformly throughout the whole chain. The same assumption is made regarding the company's financial performance due to the absence of individual data for each establishment of the chain. Likewise, the extent to which environmental strategies were implemented was not examined for the same reason. Although the companies reported whether they follow an examined policy, practice or strategy, the level of success in implementing that strategy is not accessed. As our ability to access and quantify the quality of the implemented strategy improves the potential to examine and control for additional factors in future research, will increase. Unfortunately, the majority of secondary environmental data are available from 2016 onwards, which is why the majority of previous studies relied on primary data sourced from self-reporting interviews and questionnaires which might be a source of vulnerability itself.

5.8 Future Research

The study's novel nature introduces the concept that different dimensions of environmental strategies impact differently on corporate financial performance metrics provides new avenues for further research. Future research should build upon the idea of treating environmental strategies as a multidimensional concept and incorporate additional dimensions of eco-organisational governance, such as the structure of the board of directors, their background education and customers' environmental sensitivity on training programmes. It is also vital to

examine whether consumers' eco-sensitivity can act as an additional driver of improved environmental performance and if yes, within which dimensions. Another promising area of research will be the examination of the effects of 'shareholder activism' as a driver for adopting eco-friendly strategies. The concept is gaining attention with cases of multinational firms being forced to postpone or abandon an investment, project or acquisition due to pressures from green investors.

The research relies on the evaluation of firms' environmental practices on accounting profit-related performance measures. There is a further need to investigate the effect of the firm's environmental practices on customer-based related performance metrics namely customer satisfaction, customer retention, and customer generation and financial market-related performance measures to reflect on the effects of different environmental strategies on shareholders' value. It will be fruitful to understand the long term effects of strategies found to negatively influence short-term financial performance, such as green procurement and waste/ emissions management. The different effects of environmental strategies on financial performance provide the ground to further research at what levels the implementation of such practices affects financial performance. The quantification of the effects will give the opportunity to hospitality industry firms to understand better the economic effects of the implementation of such strategies and will be a useful tool for policymakers to provide the required incentives to mitigate the adverse financial effects of such strategies. Another fruitful direction for future research will be the examination of the effects of environmental practices under specific different economic conditions such as financial crises, pandemics and natural disasters.

Since the focus was on chain outlet firms, the majority of which operate in several countries under different regulatory regimes, it would be useful to examine the extent of standardising and adapting their sustainability strategies across different jurisdictions, as well as the specific factors driving this decision. In the same vein, it would be useful to understand the moderating effect of external factors on the sustainable practices – performance link. Finally, future research should be channelled into other sectors in the services industry, such as aviation, leisure shipping, and tour operators.

6. Reduce, Reuse and Recycle in the hospitality sector: Their antecedents and performance implications

6.1 Introduction

Environmental sustainability, and the ways firms engage with it, has been a core theme of a growing body of business literature (Leonidas C Leonidou *et al.*, 2015; Trumpp and Guenther, 2017; Papagiannakis *et al.*, 2019), a prominent part of which is dedicated to the hospitality industry (Weaver, 2005; Cvelbar and Dwyer, 2013; Kallmuenzer *et al.*, 2018). Sustainability is often defined broadly, and even environmental sustainability captures a wealth of environmental issues and their managerial and technological responses, including those relevant to climate change, various types of air pollution (Kaldellis, Spyropoulos and Chalvatzis, 2004; Spyropoulos *et al.*, 2005, 2021; Kaldellis, Chalvatzis and Spyropoulos, 2007), water degradation, resource exhaustion, waste management, etcetera (Eccles, Ioannou and Serafeim, 2012).

The previous study of this thesis (Chapter 5) hypothesis 6 indicated that 'The hospitality firm's green practice related to waste/ emissions management lead to reduced financial performance. The study found significant evidence supporting this hypothesis and could discourage firms from engaging in waste management activities. Purposely I propose a new framework to examine a strategy that will prevent pollution in the first place, focusing on a strategy engaging a bundle of Reducing Reusing and Recycling practices known as the '3 Rs'. The primary reason for this choice is that the 3 Rs environmental strategy leads to savings in both materials and energy, which benefits firms and the environment alike (Song, Li and Zeng, 2015). Doing so, I provide a sound alternative to managing waste and emissions that could increase profitability. The particular study will examine in more depth the effect of a particular pollution prevention strategy, its effects in terms of profitability and financial market performance and its antecedents, i.e. how firms can deploy a 3 Rs strategy

It is specifically developments in the latter that present unprecedented challenges in how waste is being handled and, in the impact, it has on the environment and corporate world. The latter is more profound after China, in early 2018, announced it would stop accepting 24 kinds of solid waste, including commonly used plastics, which have previously been shipped there for recycling (Brooks, Wang and Jambeck, 2018; Parker and Elliott, 2018). Exporting countries and firms consider finding new markets for their waste a severe challenge and the number of

earnings calls that mentioned: “plastic waste” increased by 340 percent between 2017-18 (Eling Lee and Moscardi Matt, 2019). This crisis intensely affects the tourism industry, which has historically adopted single-use items in several customer-facing services, contributing to significant waste production (Mair and Laing, 2013). However, this time recycling is not the panacea in solving waste management as access to it has been limited by China’s and SE Asia’s import ban and more significantly it does not provide a holistic enough approach to materials and waste management.

Options beyond recycling are already becoming part of mainstream policy-making with outright bans of microbeads in the UK (DEFRA, 2018) and even more wide-reaching controlled use of plastic carrier bags (European Parliament, 2018) and ban of single-use plastic in the EU (EU Commission, 2018). The issue has been widely explored in the environmental science and industrial operations literature focusing heavily on technological responses that impact on various supply chain stages of waste production and management (Michele, 2018).

An emerging common thread in this literature is the strategic response of Reduce, Reuse, and Recycle. Essentially, recognizing the limitation of recycling this heuristic approach recommends that much before considering recycling, management practices must prioritize strategies for the reduction and reuse of materials. Aiming to cross-fertilize the management literature with the 3 Rs approach, in this study I set out to (a) shed light on the determinants of 3 Rs as a critical and under-researched environmental strategy among firms in the hospitality industry (e.g., hotels, restaurants, leisure, cruise ships); (b) use the theory of Resource-based View to examine how certain resources and capabilities can be conducive in formulating a sound 3 Rs environmental strategy; and (c) investigate how the implementation of this strategy subsequently affects both short-term (Net Profit Margin) and long-term (Tobin’s Q) business performance.

The study has major contributions and seeks to fill a number of identified gaps in the existing literature. Firstly, it focuses on the hospipitality industry, which, despite its eco-sensitive nature and crucial contribution to local economies, has not been the focus of previous 3 Rs research empirical research. The particular industry is of paramount importance as the 3 Rs have wide applicability on energy, water, and waste management practices adopted by firms' operations, providing the ground for its holistic examination.

Secondly, for the first time, the financial performance outcomes of the 3 Rs strategy are explored. Those are examined in terms of profitability as an efficiency proxy of the company and financial market performance to reflect the reaction from the stock market. Ranta et al., (2018) indicate that studies remain silent on how the circular economy business model of 3 Rs creates value for companies. In the same line, it points the lack of evidence on how the 3 Rs circular economy business model can generate value for a firm. Therefore, our first main research question is as follows: What are the performance outcomes of the 3 Rs strategy in terms of short-term profitability and long-term financial performance?

Thirdly, while it stresses the specific role of the 3 Rs as an essential aspect of the firm's environmental practices, the role of the (1) slack financial and (2) slack human resources and capabilities sourced from (1) quality assurance policies and (2) green corporate governance are examined as facilitators of the strategy. Similarly, the control effects of internal factors influencing the adoption of a 3 Rs strategy, namely, (1) country of origin and (2) establishment type, and external factors, namely, (1) firm size and (2) firm age, are explored. Therefore, the second main research question is as follows: What are the antecedents and factors that can facilitate a 3 Rs strategy?

Following this introduction, the Chapter continues with a brief review of the environmental literature within a hospitality industry context. The theory, conceptual model, and hypotheses development are presented in the next section. Following this, details about the data used are provided and the methodological approach. The next section provides the results of the data analysis with regard to hypothesis testing. The final parts discuss the findings, provide theoretical and managerial implications, and suggest directions for future research.

6.2 Theory, Model, and Hypotheses

6.2.1 Background Research

The 3 Rs principle as part of the Circular economy is described as a means to protect the environment, foster sustainable development and improve resource utilization efficiency. The principle is argued to promote the transition of the economic growth model from the traditional linear model to a circular one. Their main difference lies in adding reuse and regeneration features to achieve a closed resource loop within the circular business model (Yang et al.,

2014). The 3 Rs principle, through the years, evolved from a strategy of scarcity and poverty (Hot *et al.*, 2020) to an indicator of sound resource management aiming to lessen the pressure on the global stock of resources (Reh, 2013; Nuñez-Cacho *et al.*, 2018). The term is interrelated with the environmental proactivity of the firm found in corporate environmental sustainability literature with a partial exemption on recycling practices when those are mandatorily imposed by the institutional environment and not proactively by the firm. It is considered a circular business model which provides a framework to formulate a sustainable business strategy (Vegter et al., 2020).

There are variations of the R frameworks within the literature, with authors adding R components depending on the study's purpose. However, the main variation refers to the 6Rs where the additional concepts of recovery (Govindan, Jha and Garg, 2016; Khan *et al.*, 2020); remanufacturing (Diaz and Marsillac, 2017), and redesign (Lu, Tsai and Chen, 2012; Khan and Haleem, 2021) are introduced. For this study, I will focus on the 3 Rs framework rather than its variations due to the restrictions imposed by the activities hospitality firms are engaged in. Nevertheless, the concept is increasingly gaining traction within academia, industry, and policymakers applied in the macro (i.e., region, country) and micro (i.e., firm, consumer) levels of analysis (Ghisellini, Cialani and Ulgiati, 2016).

The applicability of the 3 Rs strategy in the context of the tourism and hospitality industry can be centred in the areas of energy, water and waste efficiency, which can lead to a subsequent reduction of their emissions and, therefore, improvement of their environmental performance. For this study's purpose, the definitions are adjusted accordingly to reflect the particularities of the hospitality industry. Table 6.1 summarizes the applicability of each of the 3 Rs practices, as identified by previous literature and the "Trip Advisor Green Leaders Programme", a brief resource about individual hotels' green practices available to the platform's users. The first in the hierarchy term "Reduce" is associated with minimising waste, energy and emissions generated before they occur and can be generic, producer or consumer-oriented (Reike, Vermeulen and Witjes, 2018). The Reduce principle should be favoured as it directly contributes to achieving a circular system and eliminates the need for reusing or recycling (Ranta, Aarikka-Stenroos and Mäkinen, 2018). Firms operating in the sector can reduce their energy use by improving the thermal insulation of their facilities. In addition, the introduction of intelligent energy management systems can reduce their energy use for heating and cooling. Water use can be reduced by installing systems that can reduce the rainwater runoff and

introducing intelligent water management systems (Rodríguez-Antón and Alonso-Almeida, 2019). Reducing their waste can be achieved by reducing the main waste identified in the industry, such as food, packaging and paper waste (Pirani and Arafat, 2016). For example, food waste reduction can be achieved by redesigning menus and using food distribution platforms. In addition, they can avoid the use of single-use plastics by promoting reusable containers (Pirani and Arafat, 2014). Finally, firms can reduce fertilizers and pesticides use and choose biodegradable and compostable products to reduce their waste.

The second in the hierarchy term of "Reuse" is defined as the re-usage of a product, or part of it, after its first life-cycle in its initial usage (Rizos, Tuokko and Behrens, 2017). Implementing "Reusing" strategies can subsequently contribute towards the achievement of "Reducing". Firms can benefit from it since fewer resources are required, which potentially can increase efficiency, reduce cost and boost revenues. The principle is fundamental in service-oriented systems where the consumer does not pay for a particular product per se but for services. Practices centred around the "Reuse" related practices in the industry can refer again to all three major areas of concern, namely 1) Energy, 2) Water, 3) Waste. For example, encouraging hotel guests to reuse their linen or towels can reduce energy and water consumption (Blose et al., 2015; Han and Hyun, 2018). Water savings can be achieved by treating wastewater systematically for Reuse (Wang *et al.*, 2018). Finally, reuse practices are widely adopted in treating waste. In particular, firms can reuse furniture, white goods service items (i.e. crockery and cutlery) and products made from recycled materials to lessen the environmental footprint in the manufacturing industry (Rodríguez-Antón and Alonso-Almeida, 2019).

Finally, "Recycle" refers to the conversion of organic materials into entirely new products. In terms of resource efficiency and transition towards a circular business model, recycling is considered the least sustainable option. Recycling is found in water and waste efficiency areas of concern. Water consumption can be reduced by separating the waste from the greywater, where the latter can be recycled for further use (Atanasova *et al.*, 2017). As expected, recycling focuses primarily on waste management practices. That can refer to recycling consumables (e.g. shampoo and soap), using easily recyclable materials and separating waste on-site such as paper, glass, cardboard, plastic, metal and used oil (Sing et al., 2014).

Table 6.1: Examples of Applicability in tourism and hospitality industry

Areas of concern	**Examples of Applicability in tourism and hospitality**	**Source**

Reduce		
Energy	• Improve the energy efficiency of the buildings • Use smart energy management systems related to temperature or lighting	(Rodríguez-Antón and Alonso-Almeida, 2019) Trip Advisor Green Leaders Programme
Water	• Reduce stormwater runoff • Use smart energy management systems related to temperature or lighting	(Rodríguez-Antón and Alonso-Almeida, 2019) Trip Advisor Green Leaders Survey
Waste	• Reduce wet waste (food) • Reduce solid waste • Reduce chemical waste (fertilizers and pesticides)	(Pirani and Arafat, 2016) Trip Advisor Green Leaders Programme
Reuse		
Energy/ Water	• Have a linen or towel reuse plan	(Han and Hyun, 2018); Trip Advisor Green Leaders Survey
Water	• Treating and reusing the wastewater	(Wang *et al.*, 2018)
Waste	• Reuse solid waste such as furniture, appliances, service items and amenities • Reuse waste from leftover food • Use of furniture or beddings made from reused or recycled materials.	(Pirani and Arafat, 2016; Rodríguez-Antón and Alonso-Almeida, 2019); Trip Advisor Green Leaders Programme
Recycle		
Water	• Separate wastewater from grey water, as the latter can be recycled for use together with rainwater.	(Atanasova *et al.*, 2017; Rodríguez-Antón and Alonso-Almeida, 2019)
Waste	• Recycle paper, glass, cardboard, plastic, metal and hazardous waste • Build establishments with easily recyclable materials and recycles building elements when buildings are rehabilitated	(Singh, Cranage and Lee, 2014; Rodríguez-Antón and Alonso-Almeida, 2019) Trip Advisor Green Leaders Survey

Sustainability research in the hospitality industry has examined various topics. First, a body of research has focused on organizational knowledge, behaviour, and attitudes against issues of sustainability and the environment (Teng *et al.*, 2012; Pereira-Moliner *et al.*, 2015; Singjai et al., 2018). Second, research has looked into the antecedents of eco-friendly behaviours and the obstacles that may prevent or slow down an eco-friendly strategy (Sharma, 2009; López-Gamero *et al.*, 2016; Hsiao et.al, 2018; Kallmuenzer *et al.*, 2018; Arun *et al.*, 2021). Third, a more extensive body of research is centred on issues pertaining to the environmental management practices of firms such as waste/water management, supply chain management, resource efficiency and service eco-friendliness (Kasim *et al.*, 2014; Bergmann, 2016;

Filimonau and De Coteau, 2019; Kularatne *et al.*, 2019) with some researchers relating their findings to environmental management schemes (Chan, 2009; Roe, Hrymak and Dimanche, 2014). Forth, a large body of literature addressed environmental marketing issues, such as offering green products/services and developing advertisement and branding campaigns that promote eco-friendliness (Hudson and Miller, 2005; Font *et al.*, 2012; Priporas, Vassiliadis and Stylos, 2012; Fraj, Matute and Melero, 2015; Rutter *et al.*, 2018). A final line of research focused on how the firm's environmentally responsible actions influence business performance (Gil et al., 2001; Leonidou *et al.*, 2013a; Kularatne *et al.*, 2019).

Hospitality sector firms tend to be resource intensive with large energy and water consumption levels and often prone to single-use materials, which encourage disposal. Even though a wide range of sustainability issues has occupied hospitality sector's research, there is minimal mention of the 3 Rs principle as a firm strategy (Rodríguez et.al, 2020). Jaroszewska et al. (2019) employed structured interviews and a comparative analysis method to confirm Polish tourism SMEs' readiness to transmit from a linear energy management business model to a circular one based on the 3 Rs principle. The majority of the existing literature studies analyzed the 3 Rs practices employed by tourism and hospitality industry firms (Menegaki, 2018; Naydenov, 2018; Rodríguez-Antón and Alonso-Almeida, 2019).

Kasim et al. (2014) adopt the 3 Rs approach to propose an innovative water management framework for hotels and other lodging firms by incorporating an additional R for "Reaching", referring to the mutual promotion and exchange of sustainable water management practices among stakeholders such as employees, communities, and customers. The study revealed that recycling water resources requires immense knowledge and technological skills; reusing necessitates high technological skills and limited knowledge while reducing can be achieved with low technological skills and knowledge.

Another prominent issue faced by the tourism industry refers to the waste management of food and solid materials. Stylos and Vassiliadis (2015) compared the perceptions of 4- and 5-star hotel managers regarding the concept of three-dimensional sustainability, identifying recycling as the most critical practice in the Reuse and recycle category for both groups. In the same line, Teng *et al.* (2012) interview senior hotel managers, indicating waste reduction practices and eco-friendly customer communication practices as their priority.

Research on the financial performance outcomes of the 3 Rs principle is nearly non-existent. Pamfilie *et al.* (2018) study the implementation of circular economy business practices and their influence on the economic performance based on hotel managers' perceptions, indicating that hotels, as a result of improving environmental and social performance, can enjoy financial gains. Furthermore, hotels' adoption of 3 Rs practices was found to positively influence customer satisfaction (Prud'homme and Raymond, 2013).

6.2.2 Theoretical Background

This study is anchored on the RBV and NRBV theoretical paradigms. The RBV theory was purposely chosen to examine how specific capabilities serve to bind different resources to be organized effectively and efficiently (Day, 1994). The RBV has been adopted in numerous studies in the hospitality industry (Wu, Lin and Lee, 2010; Cohen and Olsen, 2013; Božič and Knežević Cvelbar, 2016). The theory was initially introduced in a business context by Barney (1991), emphasizing the role of organizational resources and capabilities in achieving a competitive edge within the role of business strategy. Resources are considered both the tangibles (e.g., physical equipment, raw materials, financial reserves) and intangibles (e.g., corporate culture, reputation, intellectual capital) assets of a firm (Grant, 1991). According to the RBV, these resources need to be valuable, rare, imperfectly imitable, and non-substitutable to help design and implement the firm's strategy and ultimately achieve superior performance (Barney, 1991; Bharadwaj et al., 1993). However, to achieve this, the firm needs to have certain capabilities that are important in effectively and efficiently managing and configuring these resources into vital organizational processes (Peteraf, 1993). The capabilities of a firm are the skills developed to capture and manage those resources.

Previous research has examined the role of different resources and capabilities as the antecedents sourced internally in the firm, which drive environmental strategies under the RBV paradigm (López-Gamero *et al.*, 2016). The RBV was employed in various corporate sustainability studies, examining the role of financial and human resources as facilitators of an eco-friendly strategy that can directly influence the firm's business performance (Stabler and Goodall, 1997; Csete and Szécsi, 2015). The pertinent literature also argues that the availability of a surplus on slack resources is directly linked with managerial decisions (George, 2005). From a slack resources perspective, firms with higher available slack in place have an increased potential and flexibility to invest in sustainability causes (Boso *et al.*, 2017). In regards to

capabilities, researchers treat environmental management standards and corporate governance as green capabilities that can improve environmental performance by reducing emissions (Russo, 2009; Zhu et al., 2013), leading to the adoption of circular economy business practices (Ortas et al., 2019; Scarpellini *et al.*, 2020) such as circular eco-innovation (Scarpellini and Valero-Gil, 2020; Walton et al., 2020). For the purpose of this study, the RBV is used to explain how the financial and human slack resources and the capabilities sourced from green corporate governance and environmental standards can trigger the environmental pollution prevention strategy of the 3 Rs.

Hart (1995) capitalized on the RBV theory by applying it within an environmental context. According to this theory, the incorporation of the natural environment into strategic management can be conceptualized in terms of the following three interrelated strategic capabilities: (a) *Product stewardship*: This encompasses the development and management process of a product in a way to have a low environmental impact life cycle (b) *Pollution abatement*. This is distinguished in terms of pollution prevention and pollution control. (c) *Sustainable Development*. The term is fostered around the social dimension of the NRBV with a particular focus on emerging economies. In an assessment of the existing literature on NRBV, Hart and Dowell (2011) argue that the proactive nature of the aforementioned capabilities, as indicated by (Aragón-Correa and Sharma, 2003), can be incorporated into the NRBV theoretical paradigm to capture the dynamic and complex environments of business operations. The NRBV theory has been employed in previous studies to explain how the deployment of a proactive environmental sustainability strategy can foster an increased performance (Chan, 2005; Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010; Jin *et al.*, 2019). For the purpose of this study the theoretical framework of NRBV is used to explain how a pollution prevention strategy can foster a positive impact on financial and financial market performance. The two theories of RBV and NRBV are used simultaneously to explain both the antecedents and outcomes of the 3 Rs pollution prevention strategy.

6.2.3 The Conceptual Model

Figure 6.1 presents the study's conceptual model, which is anchored on the RBV and NRBV of the firm. I consider the existence of green corporate governance and quality assurance policies' essential capabilities for hospitality industry firms to deploy the available financial and HR slack resources to achieve a competitive advantage by implementing a 3Rs environmental strategy. I also consider that implementing the 3Rs strategy to prevent pollution on the first instance leads to superior business performance, in both the short and the long term, as measured by profitability and financial market performance metrics. Beyond that, I also explore the effects of internal (firm size and age) and external (country of origin and sub-sector) factors on both firm's sustainability practice and performance metrics.

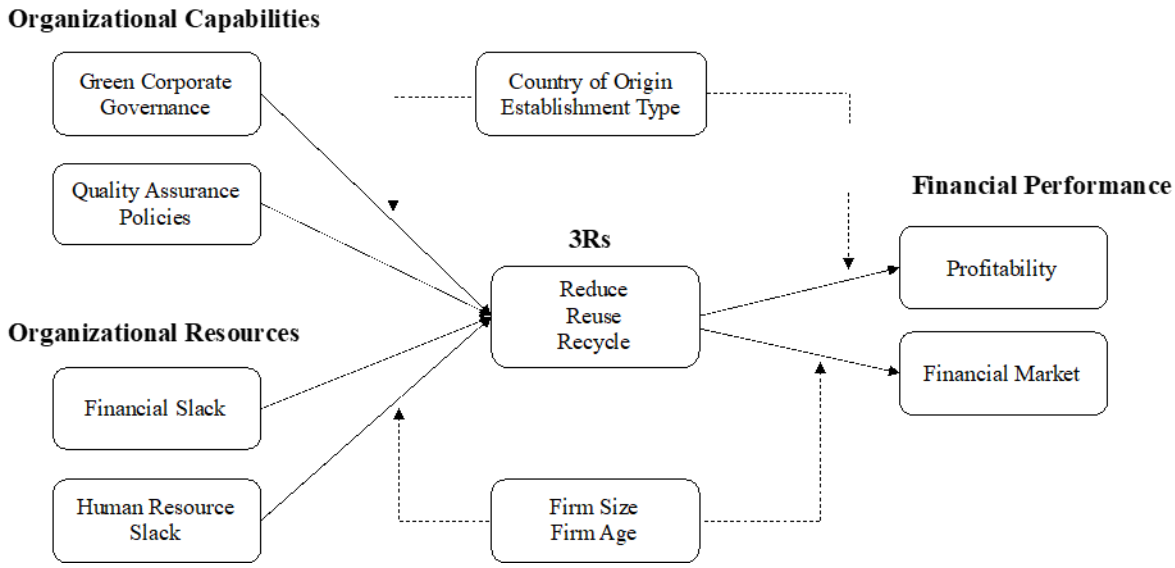

Figure 6.1: The conceptual model, Chapter 6

6.2.4 Hypotheses Development

The extant literature on strategic and environmental management identifies a comprehensive range of resources and capabilities that can help companies develop sound eco-friendly

strategies and practices leading to superior performance results (Helfat and Peteraf, 2003; Foroudi *et al.*, 2016). I examine two different types of organizational capabilities that can be incorporated with the examined 3 Rs strategy, namely, (1) green corporate governance and (2) quality assurance policies. The capability of green corporate governance refers to managers' skills, knowledge, and incentives, including in the firm's decision-making, concerning environmental issues (García-Sánchez, Hussain and Martínez-Ferrero, 2019). The role of top managers in shaping an environmentally friendly strategy is challenging in chain firms operating multinational outlets due to the differences in legal, technological and socio-cultural parameters among countries where a unique strategy should be adopted. The governance of a company administered by top management is considered as a critical determinant of a company's environmentalism (Banerjee, Iyer, and Kashyap, 2003; Leonidou, Katsikeas, and Morgan, 2013). It is the cornerstone of strategic decision-making, relating among others to sustainability issues. That might include, but not be limited, to backing initiatives such as forming a specialized environmental management team to supervise on sustainability performance, training the company's personnel in environmental awareness and green initiatives, and providing compensation incentives for sustainability-related targets as in the case of reducing waste (Banerjee, Iyer and Kashyap, 2003). Based on the above, I can hypothesize that:

H1. *Firms with higher levels of green corporate governance are better positioned to develop an environmental strategy based on the 3 Rs principle*

The landscape around Quality Assurance Policies and the adoption of an International Organization for Standardization (ISO) system or an internal Environmental Management System (EMS) has changed drastically over the last decades. The initial view that practices are simply increasing the firm's costs (Molina-Azorín *et al.*, 2015) has been progressively replaced by the view that adaption of environmental standards can provide firms with a sharp competitive edge (Hernandez-Vivanco *et al.*, 2019; Scarpellini, Valero-Gil, *et al.*, 2020; Su, Kao and Linderman, 2020). The implementation of certain Quality Assurance Systems within a major sub-industry (i.e., hotels) of the tourism sector, was found to develop employees' capabilities and create an overall social responsibility culture (Benavides-Velasco, Quintana-García and Marchante-Lara, 2014). Molina-Azorín et al. (2015) found that quality and environmental management systems can create awareness of a continuous improvement culture. Previous research (Heras-Saizarbitoria, Arana and Boiral, 2016) indicates that

voluntary-adopted EMS proves to act as a sustainability-oriented capability suitable for reducing environmental impact and increasing competitive advantage (Demirel and Kesidou, 2019). Thus, I argue that:

H2. *Firms adopting environmental quality assurance certifications at higher levels are better positioned to develop an environmental strategy based on the 3 Rs principle.*

In this study, two types of resources that play a crucial role in formulating eco-friendly marketing strategies are examined, namely human and financial slack resources. In the extant literature, these resources are regularly examined and consistently found to relate to a firm's emergence and development (Parida and Örtqvist, 2015; Bentley and Kehoe, 2020).

The theory around slack resources implies that firms with strong financial performance are better placed to offer support for social and environmental sustainability causes (Waddock and Graves, 1997). This is because slack financial resources can absorb short-term turbulences related to environmental expenditures, often seen as a major and sometimes insurmountable cost (Vilanova, 2007). Such resources are characterized as unabsorbed and uncommitted slack, that can be made readily available for redeployment for the following year (Voss, Sirdeshmukh and Voss, 2008; Paeleman and Vanacker, 2015). Specifically, in the hospitality industry, it has been found that firms with a stronger financial position are more likely to be environmentally responsible than those in a weak financial position (Leonidou et al. 2015; Shah, 2011); thus, confirming the main trend. In fact, financial resources are critical in investing in green infrastructure and environmental strategies. In that line, Aranda-Usón et al., (2019) argue that the financial resources are crucial for implementing a circular business model based on the principle of the 3R.

Hence, I may posit that:

H3. *The greater the availability of slack financial resources, the higher the likelihood of developing a 3 Rs environmental strategy.*

The level of excess of available employees in a firm is defined as the HR slack of a firm (Welbourne, Neck and Meyer, 1999; Lecuona and Reitzig, 2014). The availability of sufficient personnel to implement required tasks can help a firm's growth while adding in its existing

knowledge base. As opposed to financial resources, the HRs of a company (and particularly the HR slack) are considered as absorbed slack, while due to their idiosyncratic nature their deployment can be challenging (Paeleman and Vanacker, 2015; Khan and Mir, 2019). Previous research found that HR slack positively influences the general corporate social activities, confirming the organizational theory's view of slack resources (Adomako and Nguyen, 2020). Having an adequate number of employees engaged in environmental strategiesgy is vital for companies operating in the recreation industry since such activities are labour-intensive. Hence I hypothesize that:

H4. *The greater the availability of slack HR resources, the higher the likelihood of developing a 3 Rs environmental strategy*

The implementation of a 3 Rs environmental strategy is expected to impact the firm's business performance positively. This can be explained either by reducing the cost associated with resources used within the firm or due to the value generated by the commercialization and marketing of the followed environmental strategy (Newbert, 2008; Gupta and Kumar, 2013). Because the more generalized view of the 3 Rs environmental strategy includes strategies focusing on resource reduction, reuse, and recycling, this is expected to influence the firm's performance as consumers tend to prefer environmentally responsible firms (Kahraman and Kazançoğlu, 2019; Paparoidamis *et al.*, 2019) which can have a favourable effect on the firm's short-term (e.g., profits) and long-term (e.g., Tobin's Q) performance. A firm adopting such a strategy will be able to demand higher prices, target lucrative consumer segments, and capture a larger part in its current market segment (Claver-Cortés *et al.*, 2007). The following hypotheses can, therefore, be made:

5a. The firm's adoption of a 3 *Rs-environmental strategy will have a positive impact on its profits.*

5b. The firm's adoption of a 3 *Rs-environmental strategy will have a positive impact on its Tobin's Q.*

6.3 Analysis and Results

6.3.1 Preliminary analysis

A preliminary analysis was initially performed to ensure that regression analysis assumptions were met. The hypotheses developed were tested using multiple hierarchical regression and ordinary least squares estimator by different designated nested models. The proposed technique indicates the impact of adding additional variables to the explained variance of the dependent variable. To examine the effect of different organizational resources and capabilities on the 3 Rs environmental strategy adoption, I included the control variables' effect on the 3 Rs environmental strategy within Model 1. The direct effects of green corporate governance, quality assurance policies, financial slack, and human resource slack on the 3 Rs environmental strategy were incorporated in Model 2. The analysis was carried out using both the STATA and SPSS statistical packages to cross-validate the results.

6.3.2 Descriptive Statistics and Correlation Matrix

The descriptive statistics and the correlation between the constructs employed are provided in Tables 6-2 and 6-3, respectively. All correlations between constructs included in the same models were well below the threshold level of 0.8. Moreover, variables were checked for multi-collinearity (Stata 'Collin' command), revealing no problems since the variance inflation factor was 1.419 at its peak, while the conservative cut-off recommended by literature is 2.5 (Hawn and Ioannou, 2016). Furthermore, a Durbin Watson test was employed to check the level of independence between residuals for each of the main effects in the regression analysis, revealing values ranging between 1.767-2.320 which are within acceptable levels (Nieves and Haller, 2014). Finally, both full models' results indicate significant regressions at the 1% level, leading us to conclude that the examined independent variables have a real effect on dependent variables.

Table 6.2: Descriptive Statistics

Construct	N	Minimum	Maximum	Mean	Std. Deviation
Green Corporate Governance	143	.0	1.0	.2	.28
Quality Assurance Policies	143	0	1	.12	.25
ROA 2015	112	-16.	33.8	7.8	6.5
HR-Slack (10^5)	139	.02	6.26	.95	.92

3 Rs-Environmental Strategy	143	0	.57	.15	.14
Net Profit Margin	136	-16.8	32.25	9.38	7.97
Tobin's Q	125	.65	6.65	2.14	1.1
Revenues *10^(9)	142	0.05	30.23	3.61	5.38
Number of Years	143	2	132	27.1	21.89

*Revenues and number of years are used in their logarithmic scale during the analysis.

Table 6.3: Correlation Matrix

	Construct	1	2	3	4	5	6	7
1	Green Corporate Governance	1						
2	Quality Assurance Policies	0.117	1					
3	ROA2015	-0.051	-.216*	1				
4	HR-Slack	-.221**	.198*	-0.06	1			
5	3 Rs-Environmental Strategy	.344**	.324**	0.115	0.101	1		
6	Net Profit Margin 2017	.264**	0.046	.327**	-0.139	0.162	1	
7	Tobin's Q 2017	-0.058	-0.116	.656**	-0.009	.302**	0.146	1

Note: Unstandardized Coefficients are reported *p<0.1, **p< 0.05, ***P<0.005

6.3.3 Results

Table 6.4 shows the results of the regression analysis indicating that the inclusion of independent variables in examining the link between the company's resources (potential financial slack and HR slack) and capabilities (green corporate governance and quality assurance policies) explained an additional 9.2% of the variance. The results support hypotheses H1 and H3 because green corporate governance (β=.122, t=2.529, p<0.05) and potential financial slack (β=.004, t=2.057, p<0.05) were found to have a significant positive effect on the 3 Rs environmental strategy. Additionally, quality assurance policies were revealed to have a significant positive impact on the 3 Rs environmental strategy (β=.096, t=1.722, p<0.1), thus accepting H2. It is worthwhile mentioning that when missing values were treated with the sample mean technique, as a robustness test of the results, capabilities related to Quality Assurance Policies have a positive effect at a statistically significant level (β=.137, t=3.0533, p<0.005).

However, the results did not provide sufficient evidence to support the direct effect of HR slack towards an increased presence of the 3 Rs environmental strategy (H4). That might be revealing of the idiosyncratic nature of HR slack (Bentley and Kehoe, 2020) in that its existence is not

adequate to enhance the environmental strategy of a company. The provision of tailored training and guidance across all levels of an organizational hierarchy is central for creating a long-term competitive advantage (Voss, Sirdeshmukh and Voss, 2008).

With regard to control variables, it was confirmed that larger companies exhibited a greater tendency to adopt 3 Rs environmental strategies as opposed to their smaller counterparts. Larger firms are more vulnerable to reputational damages and risks associated with the environment as they have a larger environmental impact and wider regulatory and public visibility.

Table 6.4: Resources and Capabilities VS 3 Rs-Environmental Strategy

Constructs	Model 1	Model 2	VIF (Model 2)
Constant	-.818**	-.634**	
Controls			
Revenues (Log)	.100**	.067**	1.338
Firm Age (Log)	.028	.016	1.126
Country of Headquarters	.002	.029	1.142
GICS Sub-Industry	-.016	-.008	1.349
Main Effect			
Green Corporate Governance		.121**	1.255
QAP		.095*	1.355
Financial Slack		.004**	1.176
HR Slack		.018	1.419
Fit Statistics			
R^2	.202	.294	
R^2 Diff		.092	
F-Model	6.265**	3.092**	
Durbin Watson		1.767	

Note: Unstandardized Coefficients are reported *p<0.1, **p< 0.05, ***P<0.005

The results (Table 6.4) indicate that the adoption of a 3 Rs environmental strategy by the firm significantly affects both its short-term performance expressed in terms of net profit margins (β=14.593, t=3.041, p<0.01) and long-term performance expressed in terms of Tobin's Q (β=2.227, t=2.939, p<0.01); thus, confirming H5a and H5b respectively. These results reaffirm the view that environmental strategies can benefit different dimensions of the firm's business performance. This is in line with previous literature supporting that the adoption of environmental practices can increase sales; therefore, improving profits through retaining and attracting customers as well as improving a firm's forward-looking performance (Bhattacharyya and Cummings, 2015; Leonidas C. Leonidou, Christodoulides, *et al.*, 2015;

Niemann, Dickel and Eckardt, 2019). Additionally, reducing and reusing certain products leads to decreased costs which have a direct impact on short-term firm profitability.

Table 6.5: Regression Results of 3 Rs-Environmental Strategy and Performance

Constructs	**Net Profit Margin**		VIF (Model 2)	**Tobin's Q**		VIF (Model 2)
	Model 1	**Model 2**		**Model1**	**Model 2**	
Constant	23.881	36.288		.231	1.968	
Controls						
Revenues (Log)	-1.132	-2.611**	1.232	.350**	.136	1.219
Firm Age (Log)	.792	.255	1.082	-.025	-.096	1.046
Country of Headquarters	-4.342	-4.377**	1.045	-.415	-.435	1.038
Establishment Type	.903	1.212*	1.038	-.245**	-.183*	1.048
Main Effect						
3 Rs-environmental strategy		13.767***	1.299		2.227***	1.274
Fit Statistics						
R^2	.085	.148		.088	**.**152	
R^2 Diff		.064			.064	
F-Model	2.886**	4.31**		2.768**	4.089***	
Durbin Watson		2.082			2.232	

Note: Unstandardized Coefficients are reported *p<0.1, **p<0.05, ***P<0.005

Robustness Tests

As a robustness check, multiple rival models were estimated in which alternative and additional control variables of environmental strategies suggested in the extant literature were included, such as the number of employees instead of revenues for capturing company size. The models were re-runed using the mean sample technique to account for missing data of the sample. The direct effects of the main variables examined were found to be robust in the alternative models. In order to maintain a sufficient sample size to variables examined ratio (to allow us to test the main effects independent variables simultaneously), the additional controls were not included in the final hypothesis model.

6.4 Discussion, Implications, and Directions

One summary conclusion that can be derived from the previous analysis is that the environmental strategy centering on 3 Rs plays an important role among firms in the hospitality industry, and its implementation can be beneficial for their success. Strategies focused on the 3 Rs principle are particularly rewarding. The findings indicate that hospitality firms can benefit financially in two different directions. Firstly, they can increase their profitability metrics because they can become more efficient. They can benefit from decreasing the energy and water resources required from their operation cost. That will lead to a direct decrease in their utility expenses, which is considered one of the industry's main burdens. Also, firms adopting a 3 Rs strategy can reduce the volume of their inventories and directly reduce the costs of goods sold. Certain reuse practices can also reduce the firms' capital expenditure when equipment and machinery are reused for other purposes. While improving their resource efficiencies and reducing their operational and capital expenditures by adopting 3 Rs environmental strategies, firms can also benefit from increasing their revenues due to increasing their customer base with eco-friendly consumers.

Secondly, because the firms examined are registered in the stock market, our study indicates that implementing a 3 Rs strategy can lead to a positive evaluation from the markets. That is achieved as a result of cultivating a green brand image, gaining investors' recognition, thus increasing their firm value and achieving higher financial market valuation. At the same time, the proactive nature of the 3 Rs strategy can keep them away from legal fees or fines imposed by their governments, protecting them from reputational damages. However, the formulation of such a strategy requires a corporate governance scheme committed to a sustainability agenda and voluntary adherence to key environmental standards and certifications. The possession of the specific capabilities will exploit the resources available to adapt to the environmental changes. Our findings indicate that the adequate availability of slack financial resources is essential for adopting 3 Rs strategies. However, the number of available employees as a function of the company's size was not found to facilitate a 3 Rs strategy. That indicates that although the implementation of such strategies might require a sufficient number of employees, other factors such as their skills and expertise might be required. Finally, our study has also demonstrated that firm size can be conducive to environmental initiatives, such as those of reducing, reusing, and recycling.

6.5 Implications

The study findings have important theoretical implications. First, organizational resources and capabilities are treated as antecedents that can facilitate the formulation of a 3 Rs environmental strategy and ultimately lead to superior business performance. To the best of my knowledge, this is the first time the 3 Rs principle has been the focus of the corporate environmental strategy, holistically, in a specific industry. Hospitality, with its multifaced sustainability challenges, lends itself to this conceptual approach. Furthermore, I contribute to the slack resources theory by examining different types of slack and how they can be used to formulate an eco-friendly strategy. While the potential financial slack was found to be easily absorbed and converted into a competitive environmental strategy, HR slack is a stickier kind of slack that can be transformed into a competitive advantage under training and knowledge transfer to the employees. In addition, this study contributes theoretically to the NRBV. The study adopts a pioneered approach to conceptualizing the pollution prevention strategy in terms of the 3 Rs concept. For the first time, the NRBV is applied to test how pollution prevention, under the lens of the 3 Rs, can lead to increased profitability and financial market performance.

The study also has important implications for managers. First, it is implied that firms in the hospitality industry should install robust corporate governance mechanisms that will facilitate sustainable thinking in the organization. They also need to obtain quality assurance through environmental certifications. These, coupled with securing adequate financial and human resources, will help them embed sustainability deeper in organisational practices. Consequently, managers should take all the necessary steps to train and increase the environmental awareness of their employees for the broader adoption of a pollution prevention-oriented strategy, such as the 3 Rs principle. That could be assisted by schemes awarding employees' engagement and systematic training on sustainability initiatives. Furthermore, managers should formulate knowledge exchange collaborations across the industry as well as governmental and non-governmental bodies and cultivate customer eco-awareness as a way to promote and market such strategies successfully. The wide spectrum of activities performed by firms involved in the tourism and recreation industry (Chalvatzis and Ormosi, 2020; Stamolampros *et al.*, 2020) provides the ideal ground for a holistic approach where firms could team up with other members of the supply chain to endorse the perfect example of a circular economy at a smaller scale. It is noteworthy that the companies implementing the 3 Rs strategy also communicate it to their stakeholders; thus, managers should promote their eco-friendly

determination which will lead to a substantial improvement in their profitability and financial market valuation.

Policymakers have an imperative role to play in the formulation of a strategy based on the principle of the 3 Rs. Provision of financial assistance in the form of tax credit mechanisms, subsidies or fines, and regular environmental assessments could initiate or enhance tourism and recreation industry firms, environmental strategy. Provisions of subsidies to encourage the adoption of environmental management systems such as ISO 14001 or EMAS will help firms to acquire the necessary resources and capabilities to form a sound environmental strategy. Institutional reforms should incorporate educational programs to provide employees with the required technical expertise to implement 3 Rs strategies and the required infrastructure to support the smoother adoption of such mechanisms. Finally, governments should embrace information campaigns on the benefits of broader adoption of the 3 Rs strategy in the sector, recognize industry leaders and reward them.

6.6 Limitations and Future directions

There are certain limitations in this study that could potentially provide new roadmaps for future research. Firstly, although a comprehensive source of secondary data is used, the fact that the 3 Rs environmental strategy was treated as a whole, limits the analysis for treating each of the 3 Rs as distinguished dimensions. Hence, being able to understand their disaggregated contribution to the firm's business performance would provide useful insights, not least in terms of how close they reach to a circular economy paradigm. Through qualitative research, scholars in the field would be able to identify the specific role played by each of the 3 Rs on the firm's business performance.

Second, to obtain a more holistic view of the link between the 3 Rs environmental strategy and performance, future research could benefit by the inclusion of additional performance measures, such as those relating to the customer, product, and market metrics (Tajvidi *et al.*, 2017). Third, while the sample size and industry coverage have been satisfactory in this study, better insights could be obtained from a larger sample, as well as from the inclusion of additional sub-sectors of firms operating in the broader tourism industry. This will become gradually possible in the following years, as secondary data archiving will be more comprehensive.

Fourth, examining the moderating role of both external (e.g., regulatory intensity) and internal (e.g., organizational culture) factors on the link between antecedent variables and the propensity for 3 Rs environmental strategy would enrich this study. Similar moderators can also be used on the association between strategy and performance. Finally, the results of this research assume that environmental practices are adopted and implemented uniformly across the whole chain of subsidiaries of a firm. Hence, it would be useful to investigate how the firm's 3 Rs environmental strategy is standardized or adapted across countries and find out the country impact on business performance at the subsidiary level.

7. Conclusion

This thesis has multiple contributions and implications from an academic, policy-making and managerial point of view. The last chapter will summarise the empirical contributions of the thesis, discuss theoretical managerial and policy-making implications, identify limitations and provide directions for future research.

7.1 Empirical Contributions

The review study (Chapter 4) revealed major gaps, theoretically assessing the extant literature, and an extensive content analysis of the articles provided a map of the topics researched to date. That will contribute to an understanding of where corporate environmental sustainability stands in the international research agenda and how it can be improved by building a good inventory of knowledge of existing literature.

The theoretical assessment of the review study confirmed one of the main limitations of existing publications: the lack of a solid theoretical background on the majority of studies for supporting their argumentation. Those articles that are theoretically grounded use a wide range of theories. The topic's multi-disciplinarity is reflected in the 16 different theories used in the reviewed papers, with the number of theories employed in each study following an increasing trend throughout the years. Most importantly, recent studies borrow theories from other fields (such as social movements, network theory) or employ advancements of existing paradigms such as this thesis with the Natural Resource-based View to reflect on the new realities of the topic. Referring to the topics examined from the existing literature, the focus of environmental strategies has been the point of convergence. Studies focus mainly on macro-environmental factors as an antecedent influencing the adoption of eco-friendly strategies. Insufficient attention has been paid to internationalisation complexity characteristics, issues concerning the configuration/ entry mode, the internalisation of environmental strategies, the geographical spread international experience of years firms engaged in international business thus; merit further research.

The thesis is moving a step forward to identify what antecedents can trigger individual eco-friendly strategies. Doing so, the imperative role of the firm's green human resources is

highlighted as is recognised as a vital enabler of each environmental strategy examined. Likewise, environmentally proactive hospitality firms appeared capable of substantial commitment to employing each type of eco-friendly strategy. Hospitality firms setting targets showcase a green orientation that facilitates measurable eco-friendly strategies such as Green procurement, Waste Emissions Management and Resource efficiency, in contrast to the product/ service eco-friendliness, which is challenging to interpret quantitatively.

The thesis also contributes to the ongoing debate of the conflicting findings concerning the effect of sustainability strategies on firm performance. In particular, Product/ Service Eco-friendliness and Resource Efficiency positively influence financial performance in contrast to Green Procurement and Waste/ Emission Management. That leads to the conclusion that one size does not fit all, and hospitality firms should prioritise the strategies that can be beneficial for them and offset the adverse effects Green procurement and Waste emissions management can have on their financial performance.

The second study of the thesis (Chapter 5) provides valuable conclusions on the control variables effects on the strategies employed. For example, large firms have an environmentally friendlier supply chain than smaller firms, as large firms can command significant power over their suppliers. This way, they can encourage their suppliers to become greener if they wish to maintain their commercial relationship. Furthermore, larger companies seem to develop specific practices easier than smaller companies regarding waste/ emissions management and resource efficiency practices. This is also the case with mature firms. They tend to develop internal competencies and certain routines that help foster practices for reducing their emissions, waste, and resource efficiency practices. Moreover, restaurants and other leisure establishments seem to be more conscious than hotels of offering a greener service or product to their consumers. This is attributed to the nature of these companies since their exposure to product-related policies is profound.

The final study of the thesis focuses on the environmental strategy concerning the principle of Reduce, Reuse Recycle, known as the 3Rs, to prevent waste in the hospitality industry in the first place. The concept is considered the foundation of achieving a circular economy, and this thesis is pioneering on examining its antecedents and outcomes at a corporate level. Firms led by green-oriented corporate governance initiated by top-level managers can facilitate eco-friendly strategies as part of their decision-making responsibilities. That can be achieved by

forming specialised sustainability committees, offering human resources the required training for implementing such practices and awarding them through compensation and promotion incentives based on their environmental commitment. In the same vein, quality assurance policies can foster ecological awareness and create the required routines necessary to adopt a Reduce- Reuse-Recycle strategy.

However, following a 3Rs strategy can be costly, especially in the first years of initiation. Therefore, a financially wealthy firm is in a prime position to facilitate a green strategy, especially when budget can be made available on short notice as measured by the slack financial resources. In turn, implementing a 3Rs strategy leads to superior business performance in the short and long term. The short term's positive effect can be attributed to the reduced cost associated with resources used within the firm and the increased revenues generated from eco-conscious consumers, rewarding the firm's commitment to the environment. Finally, financial markets and investors appreciate eco-friendly firms as they demonstrate that they are aware of climate change risks and are forward-looking. That can generate value and strengthen their position in financial markets (Apostolopoulos *et al.*, 2020; Vafadarnikjoo *et al.*, 2020).

Table 7.1: Table summarising the key contributions

Thesis Key Contributions
The Systematic Review revealed the difficulties faced in previous literature to conceptualise corporate environmental sustainability for firms with international activities.
Insufficient attention has been paid to internationalisation complexity characteristics.
Hospitality firms with robust Green human resources can deploy Green procurement, Product/ Service eco-friendliness, Waste/ Emissions management and Resource efficiency strategies.
Hospitality firms with Strategic environmental proactivity can benefit from the deployment of Green procurement, Product/ Service eco-friendliness, Waste/ Emissions management and Resource efficiency strategies.
Hospitality firms setting targets showcase a Green orientation that facilitates measurable eco-friendly strategies such as Green procurement, Waste Emissions management and Resource efficiency.
Product/ Service Eco-friendliness and Resource Efficiency positively influence financial performance in contrast with Green Procurement and Waste/ Emission Management.

Green-oriented corporate governance initiated by top-level managers can facilitate a Reduce-Reuse-Recycle environmental strategy as part of their decision-making responsibilities.
Quality assurance policies can foster ecological awareness and create the required routines to adopt a Reduce-Reuse-Recycle strategy in hospitality firms.
Financially wealthy hospitality firms are better positioned to develop a Reduce-Reuse-Recycle strategy.
Implementing a 3Rs strategy leads to superior business performance in the short and long term.
The theoretical, conceptual framework of Natural Resource-Based View (NRBV) can be applied in the hospitality industry upon a different conceptualisation of corporate environmental strategies dimensions.

7.2 Theoretical implications

The thesis has important theoretical implications in the field of corporate sustainability literature. Firstly, in response to Hart & Dowell (2011) call for further research on factors driving the development of green strategies, under the lenses of the NRBV, the role of a wide range of antecedents on fostering the product stewardship and pollution abatement dimensions of corporate environmental sustainability is examined as suggested by the theory. In addition, the current thesis extends and complements the existing framework to account for distinctive attributes of firms engaging in 'service' activities. The 'service' element is incorporated in the 'Product Stewardship' strategy to complement the existing theory by accounting for the service activities of firms as part of the eco-friendliness of their products. Therefore, the thesis incorporates the 'Green Procurement' copying with advancements in international policy agreements and large multinationals' power dynamics over their suppliers to reduce their environmental footprint. Finally, the framework's 'Pollution Abatement' dimension is extended to incorporate the 'Waste/ Emissions Management' as part of this strategy. Carbon capture and removal technologies are featured as a critical solution in the race towards net-zero greenhouse emissions from corporations (Chalvatzis, 2009); thus, the theory dimension is extended to account for related strategies.

Regarding the second study of the thesis, the theoretical framework of NRBV is used to provide a different conceptualisation of a pollution prevention strategy focusing on the innovative

approach of the 3 Rs principle and examining its profitability and financial market performance. Furthermore, the RBV is used to understand how organisational resources of financial slack and HR slack and the capabilities of Green corporate governance and Quality assurance policies are treated as antecedents that can facilitate the formulation of a 3 Rs environmental strategy. The thesis demonstrated that the theory could be applied beyond the traditional resource efficiency dimension of pollution prevention to more innovative sustainable business models such as the 3 Rs to explain how firms can gain an eco-friendly competitive advantage by deploying certain resources and capabilities. The broader literature of corporate environmental sustainability is significantly advanced theoretically from this thesis since a critical theoretical instrument is significantly modified and extended to capture current global trends and particularities of firms offering services.

7.3 Managerial Implications

The thesis provides important implications for managers and hospitality industry professionals. First, the results indicate the need to develop nuanced green corporate governance to deploy corporate environmental strategies. Consequently, executives and high-level managers in the firm hierarchy should aim at training regularly their staff and themselves and create incentives through awarding the green mindset of employees. In addition, additional expertise on sustainability issues can be outsourced from external/ specialised services or internally through the company's recruitment strategy.

The thesis results indicate that having available personnel is not enough for deploying environmental sustainability strategies; instead, cultivating employees around the Ability-Motivation-Opportunity model is crucial. Equally important is the quantification of sustainability-related targets for each different dimension of environmental strategy. That could help employees focus on achieving a specific target and enjoy incremental successes.

Moreover, the thesis indicated the importance of maintaining a proactive stance toward the environment for deploying all the different dimensions of environmental strategies. That can be achieved by creating partnerships across the industry and governmental and non-governmental bodies to benefit from knowledge exchange programmes. Furthermore, investing proactively to lessen exposure to climate change risks using the available financial resources or embarking on Quality assurance certifications such as ISO 14000 could

standardise environmental mechanisms throughout the organisation and embed a green culture. The latter proved to be critical in facilitating a pollution prevention strategy in terms of achieving resource efficiency or implementing an innovative sustainable business model such as the 3 Rs.

The thesis also contributes to a long-term debate in the existing literature on whether it pays to be green, thus providing important insights for firms in the hospitality industry. Firms must be aware that the financial outcome of environmental sustainability strategies is not uniform and depends on the type of strategy implemented. The practices that are easier to communicate to consumers and other stakeholders have a direct positive effect; thus, firms should make consumers aware of their green procurement strategies. In addition, hospitality managers should implement pollution prevention strategies such as resource efficiency or implement innovative sustainable business models such as the 3 Rs rather than relying on carbon removal technologies or handling their waste after it occurs. In addition, hospitality firms incorporating strategies such as the 3 Rs can give positive signals to markets, benefiting from better market valuations beyond their profitability metrics.

7.4 Policy-making Implications

In addition to managers, this thesis provides important implications for the hospitality industry's institutions and policymakers. The conflicting results of environmental strategies on performance outcomes provide an opportunity for policymakers and institutions to fine-tune support mechanisms in areas that merit support. Specifically, hospitality firms should be supported in their efforts to green their supply chain to lessen its negative impact on financial performance.

The thesis provided a sound alternative on managing emissions and waste from where firms can benefit financially, namely the 3 Rs sustainable business model. Therefore, institutions and policymakers should encourage hospitality firms to rely on the 3 Rs strategy to treat their waste and emissions. That can be achieved through incentives in the form of tax credits and subsidies for rewarding firms that rely on pollution prevention strategies instead of control. On the contrary, strategies that negatively impact financial performance should be closely audited to prevent firms from avoiding them altogether.

Furthermore, institutional reforms should support hospitality firms adopting environmental management systems and provide educational programmes for the industry employees. Similarly, hospitality industry associations and governments should start featuring the leaders on environmental sustainability matters and reward them while campaigning the benefits of adopting pollution prevention solutions through pioneering business models such as the 3 Rs.

7.5 Limitations and Delimitations of the Thesis

Similar to other research, the thesis is not free from limitations identified in three main aspects. Firstly, even though the sample size and industry coverage have been satisfactory, the study could benefit from a larger sample, including smaller companies, which are not part of the large chains. This was not possible in the current thesis as financial data were available only for public-listed companies implying large firms.

Secondly, although the empirical studies (Chapters 5 and 6) interpret data with a time lag of two years between the different dimensions of environmental strategies and financial performance metrics, concerns on reverse causality are not eliminated. For example, a company might report a particular strategy on a specific date, but there is no certainty over the exact time that strategy is initiated within the organisation; therefore is not possible to identify which comes first. In addition, the time lag of two years can be considered insufficient for examining performance outcomes of environmental strategies since performance, especially financial market-related metrics, might need prolonged periods of longitudinal monitoring for the effects to occur. Data availability for prolonged periods will allow researchers to account for longer lagged periods, which was not possible in this thesis due to data unavailability.

Furthermore, since the sample consists of chains outlets managed through different establishments, the findings assume that the applied strategies are diffused uniformly throughout the chain as reported in the database. The same assumption is made regarding the company's financial performance since the database reports data for a firm as a whole. Another area of concern is the lack of understanding of what extent the environmental strategies researched were implemented. Thus, although the companies reported whether they follow an examined policy, practice or strategy, the level of success in implementing that strategy might vary.

Finally, the thesis has certain delimitations sourced from the contextual and methodological choices made. The first delimitation is sourced from the research's focus on the hospitality industry, restricting the generalisability of the results. Since the thesis argumentation is that corporate environmental sustainability should be examined within samples of firms engaged in similar activities, the empirical studies purposely focus on firms with activities in the hospitality industry. Thus, the findings of the empirical studies (Chapter 5) and (Chapter 6) can be generalised for firms operating in the hospitality firms globally and not extended to other industries and firms engaging in different types of activities. However, it is anticipated that the results can be generalised globally without geographical restrictions since the sampled firms have a global presence.

In addition, the methodological choice to follow a quantitative approach using secondary data adds value in terms of transparency and replicability of the studies; it is, however, a delimitation on its own since a qualitative study could reveal other factors influencing the adoption of environmental strategies. Likewise, the thesis purposely focuses on a firm-level environmental sustainability analysis; however, it is acknowledged that corporations are not the only sustainability stakeholders. Consumers and governmental institutions are completing the puzzle and have distinctive roles in tackling climate change alongside a range of sustainability issues.

7.6 Future Research

Beyond advancing the literature at multiple levels, the thesis' novel approach to conceptualising corporate environmental sustainability in various dimensions provides implications for future research. Building upon the multidimensionality of corporate environmental sustainability, a plethora of organisational antecedents can be examined for each dimension. For example, the managerial characteristics, the employee's attitudes, norms and belief systems, the leadership style, top management environmental behaviour and skills.

Future research could go beyond internal organisational drivers and examine the role of external factors influencing the adoption of environmental strategies such as the public concern/ national culture, regulatory frameworks of the home and host countries and the environmental distance between them, supplier forces, competitive forces and finally market and industrial factors. It is also vital to examine whether and which environmental strategies

the consumers' eco-sensitivity can drive. Another promising area of research will be examining the role of climate activism as a force for corporations on adopting environmental strategies. The movement has gained growing attention and has shown to play an influential role in shaping the international climate change agenda, politicians standpoints and corporate actions, particularly firms with global presence.

Moving from the antecedents of environmental strategies to their performance outcomes, future research should examine customer-based related performance metrics, namely customer satisfaction, customer retention, and customer generation. Similarly, longitudinal studies should be employed to understand strategies' long-term effects, especially those that negatively influence short-term financial performance, such as green procurement and waste/ emissions management. The nature of the secondary data used imposes limitations on examining the diffusion of environmental strategies from headquarters to the establishments under different institutional settings. Future research should examine the extent of standardisation and adaptation from the establishments and determine the country's impact on business performance at the subsidiary level.

In terms of research design, future studies could benefit from a qualitative research method, including examining case studies and in-depth interviews to better understand the synergies between corporate environmental strategies dimensions. Furthermore, the collection of primary data through surveys could be helpful to quantify the quality of the implemented environmental strategies. Finally, a mixed-methods approach can also identify when those strategies are implemented or just part of corporate greenwashing.

Finally, future research should replicate the proposed conceptual frameworks of NRBV in Chapter 5 and 3 Rs in Chapter 6 in other sectors of the economy, such as sub-sectors of the services industry and the retail industry. Moreover, the study should be replicated in a different context, such as emerging or transitional economies or firm sizes such as SMEs or family-owned businesses.

8. References

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9. Appendix

Appendix 1: Study 2 Sampled firms characteristics, Chapter 5

Company Name	**Years of Establishment**	**Type of Business**	**Country of Headquarters**	**Headquarters Region**	**Revenue/million (FY2017, USD)**
1	35	Hotel & Cruiselines	France	Europe	2,324
2	119	Restaurant	Mexico	North America	2,165
3	11	Leisure & Casinos	U.S	North America	5,079
4	9	Leisure & Casinos	Australia	Australia	383
5	31	Hotel & Cruiselines	Bermuda	North America	561
6	27	Restaurant	U.S	North America	1,032
7	12	Restaurant	U.S	North America	4,213

8	30	Leisure & Casinos	U.S	North America	2,384
9	35	Restaurant	U.S	North America	3,151
10	29	Hotel & Cruiselines	U.S	North America	4,852
11	28	Restaurant	Hong Kong	Asia	1,016
12	32	Restaurant	U.S	North America	1,089
13	27	Restaurant	U.S	North America	2,261
14	26	Hotel & Cruiselines	Hong Kong	Asia	628
15	21	Restaurant	U.S	North America	4,476
16	38	Hotel & Cruiselines	U.S	North America	1,007
17	12	Leisure & Casinos	U.S	North America	2,992
18	8	Leisure & Casinos	Canada	North America	1,236
19	14	Leisure & Casinos	U.K	Europe	1,204
20	32	Hotel & Cruiselines	South Africa	Africa	117
21	7	Restaurant	Australia	Australia	474
22	49	Restaurant	U.S	North America	2,926
23	11	Leisure & Casinos	Australia	Australia	2,570
24	24	Restaurant	U.S	North America	7,170
25	8	Restaurant	U.S	North America	1,005
26	5	Restaurant	U.S	North America	471
27	30	Restaurant	U.S	North America	529
28	42	Restaurant	U.S	North America	605
29	35	Restaurant	Australia	Australia	825
30	19	Restaurant	U.K	Europe	641
31	16	Restaurant	U.S	North America	2,788
32	28	Leisure & Casinos	Australia	Australia	105
33	13	Restaurant	U.S	North America	861

34	6	Leisure & Casinos	United Arab Emirates	Asia	150
35	28	Restaurant	U.K	Europe	868
36	13	Restaurant	U.S	North America	402
37	5	Leisure & Casinos	U.S	North America	1,474
38	26	Leisure & Casinos	U.S	North America	66
39	5	Hotel & Cruiselines	U.S	North America	1,283
40	50	Restaurant	South Africa	Africa	436
41	8	Restaurant	U.S	North America	669
42	42	Hotel & Cruiselines	Taiwan	Asia	236
43	31	Hotel & Cruiselines	Hong Kong	Asia	7,994
44	39	Hotel & Cruiselines	Malaysia	Asia	2,307
45	0	Hotel & Cruiselines	Singapore	Asia	1,789
46	22	Restaurant	South Africa	Africa	74
47	28	Leisure & Casinos	Canada	North America	488
48	131	Restaurant	U.K	Europe	2,869
49	67	Restaurant	U.K	Europe	1,297
50	51	Hotel & Cruiselines	Bahrain	Asia	99
51	28	Hotel & Cruiselines	Hong Kong	Asia	1,789
52	3	Hotel & Cruiselines	U.S	North America	1,711
53	9	Hotel & Cruiselines	U.S	North America	9,140
54	14	Hotel & Cruiselines	U.S	North America	4,685

55	15	Hotel & Cruiselines	U.K	Europe	1,784
56	36	Restaurant	U.K	Europe	2,181
57	20	Restaurant	U.S	North America	1,554
58	41	Restaurant	Philippines	Asia	2,633
59	20	Leisure & Casinos	Korea; Republic (S. Korea)	Asia	1,505
60	19	Leisure & Casinos	Malta	Europe	1,015
61	14	Hotel & Cruiselines	U.S	North America	12,882
62	26	Leisure & Casinos	U.S	North America	623
63	21	Hotel & Cruiselines	U.S	North America	22,894
64	7	Hotel & Cruiselines	U.S	North America	1,952
65	129	Restaurant	U.K	Europe	1,329
66	54	Restaurant	U.S	North America	22,820
67	42	Restaurant	Japan	Asia	2,251
68	109	Leisure & Casinos	Hong Kong	Asia	5,271
69	14	Hotel & Cruiselines	Hong Kong	Asia	5,285
70	5	Leisure & Casinos	U.K	Europe	2,154
71	8	Hotel & Cruiselines	Macau	Asia	1,966
72	33	Hotel & Cruiselines	U.S	North America	10,774
73	24	Hotel & Cruiselines	U.K	Europe	1,362
74	40	Restaurant	Thailand	Asia	1,690
75	16	Restaurant	U.K	Europe	2,920
76	26	Hotel & Cruiselines	U.S	North America	231

77	58	Leisure & Casinos	Japan	Asia	4,289
78	27	Restaurant	U.S	North America	1,783
79	47	Leisure & Casinos	Korea; Republic (S. Korea)	Asia	626
80	73	Hotel & Cruiselines	U.S	North America	2,791
81	4	Leisure & Casinos	U.S	North America	430
82	18	Restaurant	U.S	North America	428
83	23	Leisure & Casinos	U.K	Europe	921
84	19	Leisure & Casinos	U.S	North America	280
85	18	Restaurant	U.S	North America	1,381
86	3	Leisure & Casinos	U.S	North America	1,616
87	4	Restaurant	Canada	North America	4,576
88	22	Restaurant	New Zealand	Australia	372
89	64	Restaurant	U.K	Europe	918
90	15	Restaurant	Australia	Australia	268
91	38	Leisure & Casinos	Japan	Asia	788
92	14	Restaurant	U.S	North America	415
93	9	Hotel & Cruiselines	Macau	Asia	7,715
94	9	Leisure & Casinos	U.S	North America	1,263
95	4	Restaurant	U.S	North America	359
96	26	Hotel & Cruiselines	Hong Kong	Asia	2,190
97	21	Leisure & Casinos	U.S	North America	1,359
98	13	Leisure & Casinos	Hong Kong	Asia	5,360

99	25	Hotel & Cruiselines	New Zealand	Australia	680
100	28	Restaurant	U.S	North America	477
101	21	Restaurant	South Africa	Africa	50
102	13	Restaurant	U.K	Europe	3,187
103	8	Leisure & Casinos	Australia	Australia	1,802
104	33	Restaurant	U.S	North America	22,387
105	52	Hotel & Cruiselines	South Africa	Africa	1,263
106	15	Restaurant	U.S	North America	2,220
107	29	Hotel & Cruiselines	South Africa	Africa	985
108	33	Hotel & Cruiselines	U.S	North America	1,907
109	25	Restaurant	U.S	North America	1,223
110	18	Restaurant	U.K	Europe	3,810
111	4	Restaurant	U.S	North America	106
112	16	Hotel & Cruiselines	U.S	North America	5,076
113	12	Hotel & Cruiselines	Macau	Asia	4,625
114	17	Hotel & Cruiselines	U.S	North America	6,306
115	3	Restaurant	China	Asia	7,144
116	22	Restaurant	U.S	North America	5,878

Appendix 2: Study 3 Sampled Firms Characteristics, Chapter 6

Company Name	**Years of Establishment**	**Type of Business**	**Country of Headquarters**	**Headquarters Region**	**Revenue/ Million (FY2017, USD)**
1	36	Hotels & Cruiselines	France	Europe	2,324
2	30	Restaurants	Mexico	North America	2,165

3	13	Restaurants	U.S	North America	14,604
4	9	Restaurants	Uruguay	South America	3,320
5	35	Leisure & Casinos	Australia	Australia	1,922
6	42	Restaurants	Italy	Europe	5,987
7	32	Hotels & Cruiselines	Bermuda	North America	561
8	28	Restaurants	U.S	North America	1,032
9	13	Restaurants	U.S	North America	4,213
10	8	Restaurants	U.S	North America	547
11	31	Leisure & Casinos	U.S	North America	2,384
12	36	Restaurants	U.S	North America	3,151
13	30	Leisure & Casinos	U.S	North America	4,852
14	29	Restaurants	Hong Kong	Asia	1,016
15	45	Hotels & Cruiselines	U.S	North America	17,510
16	19	Hotels & Cruiselines	U.K	Europe	17,510
17	33	Restaurants	U.S	North America	1,089
18	27	Restaurants	U.S	North America	2,261
19	27	Hotels & Cruiselines	Hong Kong	Asia	628
20	21	Restaurants	U.S	North America	4,476
21	39	Hotels & Cruiselines	U.S	North America	1,007
22	82	Leisure & Casinos	U.S	North America	883
23	33	Hotels & Cruiselines	South Africa	Africa	117

24	8	Restaurants	Australia	Australia	474
25	19	Restaurants	U.K	Europe	30,232
26	11	Hotels & Cruiselines	Australia	Australia	249
27	50	Restaurants	U.S	North America	2,926
28	12	Leisure & Casinos	Australia	Australia	2,570
29	24	Restaurants	U.S	North America	7,170
30	9	Restaurants	U.S	North America	1,005
31	6	Restaurants	U.S	North America	471
32	31	Restaurants	U.S	North America	529
33	43	Restaurants	U.S	North America	605
34	36	Restaurants	Australia	Australia	825
35	20	Restaurants	U.K	Europe	641
36	17	Restaurants	U.S	North America	2,788
37	29	Leisure & Casinos	Australia	Australia	105
38	14	Restaurants	U.S	North America	861
39	7	Leisure & Casinos	United Arab Emirates	Asia	150
40	29	Restaurants	U.K	Europe	868
41	14	Restaurants	U.S	North America	402
42	6	Leisure & Casinos	U.S	North America	1,474
43	23	Restaurants	France	Europe	7,586
44	26	Leisure & Casinos	U.S	North America	66
45	6	Hotels & Cruiselines	U.S	North America	1,283
46	50	Restaurants	South Africa	Africa	436
47	8	Restaurants	U.S	North America	669

48	32	Hotels & Cruiselines	Australia	Australia	2,129
49	43	Hotels & Cruiselines	Taiwan	Asia	236
50	32	Leisure & Casinos	Hong Kong	Asia	7,994
51	51	Leisure & Casinos	Malaysia	Asia	4,950
52	39	Leisure & Casinos	Malaysia	Asia	2,307
53	35	Leisure & Casinos	Singapore	Asia	1,789
54	21	Leisure & Casinos	U.S	North America	510
55	22	Restaurants	South Africa	Africa	74
56	29	Leisure & Casinos	Canada	North America	488
57	19	Leisure & Casinos	Greece	Europe	1,746
58	132	Restaurants	U.K	Europe	2,869
59	68	Restaurants	U.K	Europe	1,297
60	51	Hotels & Cruiselines	Bahrain	Asia	99
61	9	Leisure & Casinos	Isle of Man	Europe	1,075
62	3	Hotels & Cruiselines	U.S	North America	1,711
63	9	Hotels & Cruiselines	U.S	North America	9,140
64	15	Hotels & Cruiselines	U.S	North America	4,685
65	18	Leisure & Casinos	Hong Kong	Asia	1,044
66	15	Hotels & Cruiselines	U.K	Europe	1,784
67	5	Leisure & Casinos	U.K	Europe	4,939
68	66	Leisure & Casinos	U.S	North America	671
69	9	Leisure & Casinos	Canada	North America	366
70	36	Restaurants	U.K	Europe	2,181
71	20	Restaurants	U.S	North America	1,097
72	41	Restaurants	Philippines	Asia	2,633
73	21	Leisure & Casinos	Korea; Republic (S. Korea)	Asia	1,505

74	19	Leisure & Casinos	Malta	Europe	1,015
75	15	Leisure & Casinos	U.S	North America	12,882
76	9	Hotels & Cruiselines	U.S	North America	267
77	22	Hotels & Cruiselines	U.S	North America	22,894
78	8	Hotels & Cruiselines	U.S	North America	1,952
79	129	Restaurants	U.K	Europe	1,329
80	55	Restaurants	U.S	North America	22,820
81	42	Restaurants	Japan	Asia	2,251
82	109	Leisure & Casinos	Hong Kong	Asia	5,271
83	15	Leisure & Casinos	Hong Kong	Asia	5,285
84	6	Leisure & Casinos	U.K	Europe	2,154
85	9	Leisure & Casinos	Macau	Asia	1,966
86	33	Leisure & Casinos	U.S	North America	10,774
87	25	Hotels & Cruiselines	U.K	Europe	1,362
88	41	Hotels & Cruiselines	Thailand	Asia	1,690
89	17	Restaurants	U.K	Europe	2,920
90	26	Leisure & Casinos	U.S	North America	231
91	41	Hotels & Cruiselines	Spain	Europe	1,855
92	8	Hotels & Cruiselines	U.S	North America	5,396
93	59	Leisure & Casinos	Japan	Asia	4,289
94	61	Leisure & Casinos	Ireland; Republic of	Europe	2,358
95	28	Restaurants	U.S	North America	1,783
96	47	Leisure & Casinos	Korea; Republic (S. Korea)	Asia	626
97	37	Leisure & Casinos	U.S	North America	3,148

98	4	Leisure & Casinos	U.S	North America	430
99	7	Leisure & Casinos	Isle of Man	Europe	968
100	18	Restaurants	U.S	North America	428
101	24	Leisure & Casinos	U.K	Europe	921
102	18	Restaurants	U.S	North America	1,381
103	4	Leisure & Casinos	U.S	North America	1,616
104	5	Restaurants	Canada	North America	4,576
105	22	Restaurants	New Zealand	Australia	372
106	65	Restaurants	U.K	Europe	918
107	16	Restaurants	Australia	Australia	268
108	39	Leisure & Casinos	Japan	Asia	788
109	34	Hotels & Cruiselines	U.S	North America	8,778
110	14	Restaurants	U.S	North America	415
111	10	Leisure & Casinos	Macau	Asia	7,715
112	2	Leisure & Casinos	U.S	North America	3,084
113	15	Hotels & Cruiselines	Australia	Australia	154
114	10	Leisure & Casinos	U.S	North America	1,263
115	5	Restaurants	U.S	North America	359
116	27	Hotels & Cruiselines	Hong Kong	Asia	2,190
117	22	Leisure & Casinos	U.S	North America	1,359
118	13	Leisure & Casinos	Hong Kong	Asia	5,360
119	25	Leisure & Casinos	New Zealand	Australia	680
120	44	Restaurants	France	Europe	24,647
121	25	Leisure & Casinos	U.S	North America	454
122	21	Restaurants	South Africa	Africa	50

123	13	Restaurants	U.K	Europe	3,187
124	8	Leisure & Casinos	Australia	Australia	1,802
125	34	Restaurants	U.S	North America	22,387
126	2	Leisure & Casinos	Canada	North America	1,312
127	52	Leisure & Casinos	South Africa	Africa	1,263
128	25	Leisure & Casinos	Australia	Australia	1,717
129	15	Restaurants	U.S	North America	2,220
130	12	Hotels & Cruiselines	U.K	Europe	12,066
131	32	Hotels & Cruiselines	Canada	North America	2,333
132	30	Leisure & Casinos	South Africa	Africa	985
133	96	Hotels & Cruiselines	Germany	Europe	21,893
134	34	Leisure & Casinos	U.S	North America	1,907
135	25	Restaurants	U.S	North America	1,223
136	19	Restaurants	U.K	Europe	3,810
137	18	Leisure & Casinos	U.K	Europe	2,128
138	4	Restaurants	U.S	North America	106
139	16	Hotels & Cruiselines	U.S	North America	5,076
140	13	Leisure & Casinos	Macau	Asia	4,625
141	17	Leisure & Casinos	U.S	North America	6,306
142	3	Restaurants	China	Asia	7,144
143	22	Restaurants	U.S	North America	5,878

Appendix 3: Full list of S.R papers, Chapter 4

Citation	Theory	Findings
(Yu *et al.*, 2020)	Ability–motivation–opportunity theory, Contingency theory	Results indicated (1) Green human resource management (GHRM) is significantly and positively related to environmental cooperation with customers and suppliers, and that the relationships are significantly moderated by internal Green supply chain management (GSCM).
(Aigbedo, 2019)	Miscellaneous	Industrial goods companies headquartered outside Europe can learn environmental best practices in Europe, and endeavour to implement them throughout their global operations.
(Jin *et al.*, 2019)	Pollution halo hypothesis (PHH) theory, NRBV, Contingency	(1) The effect of parent company cross-border environment management is more pronounced than that of local environmental regulation on environmental performance. (2) The combined effect of the two mediating variables is the highest; though, they play varied roles across the different independent variables.
(Shaharudin *et al.*, 2019)	Resource-based view, Natural Resource-based View	(1) Recovery and integration capabilities positively influence product returns, while manufacturing and integration capabilities and product return influence closed-loop supply chain adoption. (2) indicate that the volume, type, timing, and quality of product returns partially mediate relationships between recovery and integration capabilities and closed-loop supply chain adoption.
(Rudawska, 2019)	N/A	The research results suggest that both groups of (Business to business) B2B and B2C companies implement sustainable marketing tools to some extent. However, in most cases, B2B organizations do it to a significantly greater extent. Nevertheless, these activities relate mainly to those tools directly visible to customers, both institutional and individual, such as packaging, product ingredients or certificates. To a lesser extent, they involve marketing activities of an internal nature, such as production process and the level of energy, water or resources used.
(Gangi *et al.*, 2019)	Stakeholder Theory	There is a positive impact of effective corporate governance mechanisms on banks' environmental engagement. 2) banks that are more sensitive to environmental issues also exhibit less risk.
(Todaro *et al.*, 2019)	Institutional Theory, Contingency theory	The results highlight that, while managers' perceived stakeholders' concern for the natural environment directly influences substantive internalization, governmental regulatory reliefs fail to influence EMS's internalization. Similarly, managers' environmental concern emerges as an antecedent of internalization, while managers' adherence to an alignment logic between economic and environmental objectives does not contribute to internalization.
(Banerjee, Gupta and Mudalige, 2019)	N/A	The results indicate that (1) Environmentally sustainable practices (ESP) negatively influence financial constraints. (2) Firms adopting ESP in countries with high institutional qualities benefit more. (3) High environment-intensive industries adopting ESP are less financially constrained. (4) Low competitive firms adopting ESP face significantly fewer financial constraints.

Citation	Theory	Findings
(Theoharakis, Bicakcioglu and Tanyeri, 2019)	Contingency theory	The study results demonstrate that green business strategy has a strong and positive relationship with export financial performance. Also, environmental orientation and cost leadership play a significant and positive moderating role in this relationship. However, green product differentiation is complementary with a green business strategy only when a cost leadership strategy is maintained.
(Ellimäki *et al.*, 2019)	Legitimacy theory	Firm's progressive globalization increases its environmental disclosure but does not affect its environmental performance. The results demonstrate that a weak home country institutional context reinforces a global firm's interest in gaining legitimation through its environmental disclosure and performance; however, a strong level of home country institutional development reduces its interest in legitimation's environmental sources.
(Montalbano and Nenci, 2019)	N/A	The empirical analysis indicates heterogeneous results by firm size and the industrial sector in the relationship between energy efficiency and productivity and between energy efficiency and exporting.
(Leyva-de la Hiz, Hurtado-Torres and Bermúdez-Edo, 2019)	Institutional Theory	The results show that firms from countries with environmental, institutional weakness reinforce their utilization of technological capabilities to generate environmental innovations in international contexts
(Pucheta-Martínez and Gallego-Álvarez, 2018)	Institutional and Stakeholder theories.	The findings report that companies operating in countries with high ownership dispersion and where the most capital markets are most likely to disclose environmental issues, while firms domiciled in countries with strong investor protection are not associated with environmental disclosure policies.
(Ardito and Dangelico, 2018)	N/A	Findings showed 1) both market, and environmental management orientations positively affect carbon, energy, and water productivity; green supply chain management orientation has a positive influence on waste and water productivity; (2) technology orientation negatively affects carbon and waste productivity.
(Testa et al., 2018)	N/A	The study indicates that it does not pay to be a green-washer, whereas the decision to not properly communicate a firm's environmental commitment is associated with lower financial performance.
(Testa et al., 2018)	Neo-institutional theory	Institutional pressures generally strengthen the internalization of proactive environmental practices, with stakeholders' influence, further supporting the integration of these practices or encouraging their superficial adoption.
(Auer, 2018)	N/A	Industries do not appear to significantly react to their stakeholders' changing environmental demands in all business sectors. Particularly industries in Europe show significant downward trends.
(Akhtar *et al.*, 2018)	Resource-based View, Social network theory	Top management tangible competencies are the key determinants for building Relationship-based business networks, mediating the correlation between Top management tangible competencies and environmental sustainability. Directly, the competencies also play a vital role towards environmental practices.
(Joo, Seo and Min, 2018)	N/A	Learning capability was found to affect environmental collaboration positively. Further, environmental collaboration positively affected environmental performance.
(Jiang *et al.*, 2018)	Dynamic Capabilities Theory	Green entrepreneurial orientation has positive influences on both environmental and financial performance. In addition, green technology dynamism only negatively moderates the relationship between green entrepreneurial orientation and environmental performance, while knowledge transfer and integration

Citation	Theory	Findings
		positively moderate the relationships between green entrepreneurial orientation and environmental and financial performance.
(Kang and He, 2018)	Institutional theory and Resource-based View	Environmental orientation and innovation capabilities positively moderate the effect of institutional forces on the firm's EMS.
(Sinnandavar, Wong and Soh, 2018)	Transaction Cost Economics	The supply environment that represents transaction attributes affects Supply chain integration, which positively affects operational and environmental performance. Information system reduces information asymmetry between transacting organizations and moderates the effect of supply environment on SCI. Results provide evidence that SCI is dependent on the context of the supply environment. The proper information system could also curtail opportunistic behaviour due to information asymmetry.
(Shi and Xu, 2018)	N/A	In more pollution-intensive industries, stricter environmental regulation reduces both the probability that a firm will export and the volume of exports.
(Miras-Rodríguez, Machuca and Escobar-Pérez, 2018)	Institutional Theory, and Trade-Off and Eco-Efficient Theories	Results revealed that the factors that most influenced environmental practices adoption in manufacturing plants differed in the considered cultural environments: rule-vs. relation-Based. Cost Savings were the main environmental practices driver in plants in the most advanced rule-based countries, while Top Management support was revealed to be the primary motivation in plants in relation-based countries.
(Q. Li *et al.*, 2018)	N/A	The findings indicate that horizontal (with competitors), backward and forward vertical linkages (with supply chain actors) all had a positive effect on an industry's overall environmental performance. Moreover, backward industrial linkages (with suppliers) have stronger environmental spillovers than forward (with distributors) and horizontal industrial linkages.
(Chen, Ngniatedema and Li, 2018)	N/A	The results show that green initiatives have a positive impact on green performance, which in turn has a positive impact on financial performance. However, the impact of green initiatives varies by country.
(Al-Ghwayeen and Abdallah, 2018)	N/A	The results revealed that Green supply chain management positively affects both Environmental and Export performance. It is also found that Environmental performance mediates the relationship between Green supply chain management and export performance.
(Kawai, Strange and Zucchella, 2018)	Institutional theory, Stakeholder theory	The findings indicate that MNC subsidiaries need to meet market stakeholders' pressures in order to achieve social legitimacy in host countries and that the implementation of formal environmental management systems (EMS) is an important mechanism translating these pressures into green innovation initiatives. Furthermore, the study indicates that the positive relationship between market stakeholder pressures and EMS implementation is reinforced by global 'green' institutional pressures in the different host countries.
(Joo, Seo and Min, 2018)	Institutional Theory, Ecological modernisation theory	The findings of the research paper are 1) Government intervention helped the firm improve its environmental and technological innovation capabilities 2) the firm's environmental and technological innovation capabilities improved the firm's environmental and export performance. 3) the government assistance in the firm's development of Research

Citation	Theory	Findings
		and Development played a greater role in improving the firm's export performance than the government consulting assistance and environmental information sharing with the firm.
(Liu *et al.*, 2018)	Resource-based view	Internal and external supply chain integration capabilities are significantly related to the successful adoption of a green design strategy in firms operating in China in contrast with firms operating in Western countries. Green design is found to impact environmental performance in both contexts positively; Finally, the environmental performance was found to have a significant and positive impact on economic performance in both contexts.
(Bıçakcıoğlu, 2018)	Resource-based view, Stakeholder Theory, Institutional Theory	Capabilities and resources and four external stimulating forces (i.e., stakeholder pressures, institutional-based, network-based, and external factors) encourage companies to implement green business operations
(Hendriks, Slangen and Heugens, 2018)	Resource dependence theory, The attention-based view	The study suggests that added cultural distances reflect headquarters executives' desire to avoid ineffective foreign expansions, hinting at possible biases in studies of the performance effects of distance.
(Symeou, Zyglidopoulos and Williamson, 2018)	N/A	Internationalization positively impacts extractive's industries the overall environmental performance.
(Macchion *et al.*, 2017)	N/A	The main results of the research clearly show the positive impact of these practices on innovation performance. The paper also proves a moderating effect exerted by internationalisation on the relationship between environmental sustainability and innovation performance.
(Vastola, Russo and Vurro, 2017)	N/A	This study provides evidence that specific cultural orientations (i.e. uncertainty avoidance, masculinity, and long-term orientation) significantly affect the extent to which the financial performance (i.e. ROA and ROE), as well as the market value of firms (i.e. Tobin's q), are influenced by improvements in CEP, in both the short-term and the medium-term.
(Delgado-Márquez and Pedauga, 2017)	Legitimacy theory	Regulated (non-regulated) MNEs display worse (better) environmental performance levels and disclose less (more) environmental information than MNEs operating in non-regulated (regulated) environments.
(Tsai and Liao, 2017)	Contingency theory	The effect of innovation capacity on eco-innovation depends on the levels of the four moderators. Innovation capacity has different effects on eco-innovation when customers demand eco-innovation, export markets have high environmental awareness, future environmental regulations are expected, and the government provides a subsidy for environmental innovation.
(Czerny and Letmathe, 2017)	N/A	The study's findings show that eco-efficiency was generally not evident among the companies during the first two trading periods. It furthermore indicates that GHG emissions were generally not reduced cost-effectively, as companies' intrinsic values were more likely to have influenced carbon reduction related decisions to a greater degree than the economic incentives resulting from the market mechanisms of the Emissions Trading Scheme.

Citation	Theory	Findings
(Li, Zhou and Wu, 2017)	N/A	The relational capacity of knowledge integration mediates the performance impact of market-oriented environmental sustainability, and such a mediating process of leaning is further enhanced by international buyer involvement.
(Corrocher and Solito, 2017)	N/A	European SMEs tend to be slow in adopting specific green innovation strategies and that the choice of these strategies differs remarkably across different sectors. Final goods producers are more likely to adopt green innovation strategies, while firms in business-oriented sectors such as infrastructure-based services are less likely to undertake any green strategy. The results also confirm that a higher need to impact on final consumers' perception increases the use of strategies that exploit reputational assets on the market. The technological content characterising each sector, the degree of knowledge intensity and the propensity to perform internal RandD activity spur green patents' adoption. However, only firms in sectors with a relatively high level of output tangibility are likely to adopt a bundle of strategies that involve the simultaneous use of EMAS and green patents. Firms in high-tech sectors where the output is intangible (KIBS) are more likely to protect their green investments through patents but do not resort to EMAS.
(Antonietti, De Marchi and Di Maria, 2017)	Pollution haven/ halo hypothesis (PHH) theory	Stricter environmental regulation is related to a higher probability of production being outsourced to foreign suppliers in the South, but not foreign direct investments. In addition, eco-innovative firms are found more likely to adopt governance decisions that enable a stricter control over the supply chain, as in foreign direct investments.
(Baral and Pokharel, 2017)	N/A	The theme "generating the profit" emerged in the majority of the companies, while other themes of "caring for the people" and "safeguarding the planet" appeared moderately Fewer companies had the triple bottom line (profit, people, and planet themes) in their strategic documents.
(Haleem, Farooq and Wæhrens, 2017)	Stakeholder Theory	Supplier-related corporate social responsibility practices to have a mediation effect in the relationship of stakeholder pressure and environmental performance, and stakeholder pressure and financial performance, respectively.
(Sadovnikova and Pujari, 2017)	Dynamic capabilities theory	Announcements of green marketing partnerships have an immediate positive and significant effect on shareholder value, whereas green technology partnerships' announcements produce an immediate negative effect.
(Achabou, Dekhili and Hamdoun, 2017)	N/A	Exporting companies have indeed benefited from environmental upgrading, but, because of the cooperation strategy adopted by leading western firms (imposition of standards) and the absence of financial and technical assistance, the extent of environmental upgrading remains limited
(Riikkinen, Kauppi and Salmi, 2017)	N/A	The study finds that only realized absorptive capacities impact sustainability practices in purchasing, and this impact is smaller in MNCs than in other companies.
(Li and Zhou, 2017)	Pollution haven/ halo hypothesis (PHH) theory	The study found that U.S. plants release less toxic emissions when their parent firm imports more from low-wage countries (LWCs). Consistent with the Pollution Haven Hypothesis, goods imported by U.S. firms from LWCs are in more pollution-intensive industries. U.S. plants shift production to less pollution-intensive industries, produce less waste, and spend less on pollution abatement when their parent imports more from

Citation	Theory	Findings
		LWCs. The negative impact of LWC imports on emissions is stronger for U.S. plants located in counties with greater institutional pressure for environmental performance, but weaker for more-capable U.S. plants and firms.
(Chen, Ong and Hsu, 2016a)	Resource-based view	Construction firms that are proactive in strategic environmental management exhibit greater internationalization up to an extent, where additional proactivity then no longer correlates with further heightened internationalization.
(Chen, Ong and Hsu, 2016b)	N/A	The study supports the view that proactive environmental management practices perform better in business. Echoing previous studies, EMS governance and stakeholder engagement have positive linear impacts on financial performance. Nonetheless, the inverted U-shaped curvilinear relationship (pollution abatement on-site) and U-shaped curvilinear relationship (product innovation) highlight that there are optimal points of financial benefit. For pollution abatement, on-site, excessive implementation can adversely impair financial performance. On the other hand, high and low innovation firms are more likely to generate greater revenue growth than moderately innovative firms.
(Kim, Moon and Yin, 2016)	Stakeholder theory	Foreign firms perform better than local firms when they are under high environmental pressure in the emerging host country, and this result is driven by foreign firms originating from countries with high environmental pressure.
(Lin and Ho, 2016)	Institutional theory	The study key result indicates that while reactive strategies improve firms' process-based environmental performance in the short term, proactive strategies can enhance innovation-based performance in the long term.
(Daddi *et al.*, 2016)	Institutional theory	The paper highlights the more positive influence of mimetic and normative pressures than coercive ones in stimulating innovative and competitive responses by firms with environmental certification.
(Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016)	N/A	Green practices and structures are positively related to strategic flexibility development, driving above-average returns in dynamic environments.
(Bu and Wagner, 2016)	Resource-based view	Heterogeneity in capabilities and firm size jointly determine foreign direct investment and shows the simultaneity of a race to the bottom and to the top. Specifically, firms with environmental capabilities invest in more stringently regulated regions, and firms with weaknesses are less likely to target such regions. These diverging effects are both moderated by firm size, which further amplifies each of them.
(Chan and Ma, 2016)	Institutional theory, Contingency Resource-based View	The findings show that CEOs' environmental beliefs and SMEs' efforts in scanning developed markets contribute significantly to developing their internal and external environmental orientations, respectively.
(Amran *et al.*, 2016)	Institutional theory	The study indicates that ASEAN businesses were aware of climate change and focused on fuel efficiency and greenhouse gas emissions reduction strategies. Even though few businesses integrated climate change into

Citation	Theory	Findings
		their business strategy, several factors (board of directors with international experience, organisational slack, and country effect) influence ASEAN climate change business strategy.
(Sancha, Wong and Thomsen, 2016)	Contingency theory, Transaction cost economics (TCE) and Social exchange theory	The results suggest that while transactional and relational mechanisms lead to suppliers' commitment to environmental issues, their effectiveness can be leveraged if applied under specific conditions. In particular, transactional mechanisms are more effective in high product complexity and high relationship stability and adaptability.
(Del Bosco and Misani, 2016)	Legitimacy theory	Cross-listing improves the environmental dimension of CSR but not corporate governance. The effects also depend on investor protection regimes of listing destinations
(Marquis, Toffel and Zhou, 2016)	Institutional Theory	Results show that firms that are more environmentally damaging, particularly those in countries where they are more exposed to scrutiny and global norms, are less likely to engage in selective disclosure
(Martínez-Ferrero and Frías-Aceituno, 2015)	N/A	investors can identify economic, social and environmental practices generating a positive effect on financial performance.
(Misani and Pogutz, 2015)	Stakeholder Theory	Firms achieve the highest financial performance when their carbon performance is neither low nor high, but intermediate. We also find that environmental processes moderate this relationship as they reinforce firms' financial performance through improved stakeholder management.
(Wagner, 2015)	N/A	The findings indicate a positive association of employee satisfaction benefits with environmental management system implementation thereby providing cross-national evidence for the frequent argument, that the degree to which environmental management system implementation is associated with human resource-related benefits is partly moderated by country-level factors related to national culture and regulation.
(Wu, 2015)	Resource dependence theory	Environmental pressures emanating from different types of customer have different impacts on firm environmental conduct. The pressures from multinational consumers have a stronger effect on local Chinese suppliers' propensity to reduce product environmental risks than local consumers.
(Leonidas C Leonidou *et al.*, 2015) (Leonidas C. Leonidou, Leonidou, *et al.*, 2015)	N/A	The findings confirm the instrumental role of external forces (i.e., foreign environmental public concern and competitive intensity) and internal factors (i.e., top management green sensitivity and green organizational culture) in crafting an environmentally friendly export business strategy.
(L. C. Leonidou et al., 2015)	Dynamic Capabilities Theory	Organizational learning, shared vision, and cross-functional integration are conducive to creating a green competitive advantage. In turn, an eco-based advantage positively affects global financial performance.
(Shah, 2015)	Institutional theory and Resource-based View	Findings suggest that foreignness liability, degree of equity control by partners and control over leadership appointments are all statistically significant influences on corporate environmental responsibility.
(Mengze and Wei, 2015)	N/A	Banks in different countries with different environmental credit risk management performance levels
(Tatoglu *et al.*, 2014)	Institutional theory and Resource-based View	The study proposes four antecedent factors that motivate the adoption of voluntary environmental management practices in MNE subsidiaries: (i) stakeholder pressure; (ii) perceived polluting potential; (iii) customer focus; and (iv) competitive intensity. Except competitive intensity, findings from the data support

Citation	Theory	Findings
		the positive and significant effects of these antecedent factors on the adoption of voluntary environmental management practices
(Dam and Petkova, 2014)	N/A	It was found that generally, there is a marginally significant negative stock price reaction to the announcement of participation in this environmental supply chain sustainability programs. However, the authors argue and show that firms in industries that have historically faced more pressure from consumers are less likely to announce their participation. If one corrects for this industry bias, then the negative stock price reaction is even more pronounced.
(Aguilera-Caracuel, Fedriani and Delgado-Márquez, 2014)	N/A	The MNEs are willing to standardize their environmental performance if they have "very big" headquarters and "big" subsidiaries; other factors affecting is the country of origin, whether they are profitable and have a low level of formal environmental, the institutional distance between countries.
(Ortas, Moneva and Álvarez, 2014)	Slack resources theory	There is bidirectional causality between sustainable supply chain performance and companies' margins and revenue. However, the link between firms' profitability and sustainable supply chain performance is unidirectional. In addition, the recent financial crisis altered this link between the studied constructs. Finally, a wide diversity in relationship patterns between sustainable supply chain performance and companies' Financial performance emerges when the full sample is divided into different geographical regions and economic sectors
(Albornoz *et al.*, 2014)	Environmental spillovers	Foreign-owned firms, large firms and those with a greater capacity to assimilate new environmental technologies are more likely to adopt Environmental actions. We also show that formal and informal networks aid the adoption of Environmental actions in the presence of traditional firm-level spillovers. Finally, foreign-owned firms have different motives to domestic firms for undertaking such actions
(Soltmann, Stucki and Woerter, 2014)	N/A	The results show that green inventions are U-shape related to performance. However, the turning point is relatively high and hence only relevant to a few industries. This indicates that—given the current level of green promotion—market incentives alone are not sufficient to allow the green invention activities of industries to rise considerably
(Galeazzo, Furlan and Vinelli, 2014b)	Contingency theory	The integration between Environmental management and Operations management is contingent upon the degree of project uncertainty and project complexity.
(Zeriti *et al.*, 2014)	Contingency theory	The results indicate that sustainable export marketing strategy adaptation is the outcome of the differences between home and export markets regarding economic and technological conditions, competitive intensity, customer characteristics, and stakeholder pressures. Moreover, the performance relevance of sustainable export marketing strategy adaptation requires adequate fit with these macro- and microenvironmental factors
(Leonidou *et al.*, 2014)	Legitimacy theory	The results indicate that, the stronger the greenness of an advertisement: (a) the greater the use of focal points relating to a product, processes, image, and facts; (b) the more specific, strong, substantive, and acceptable are the issues raised; (c) the higher the employment of rational, emotional, and moral points to leverage environmental matters; and (d) the sharper the driving forces relating to the planet and its flora, fauna, and human entities.

Citation	Theory	Findings
(Galeazzo, Furlan and Vinelli, 2014a)	N/A	Lean and green practices may be implemented sequentially or simultaneously, generating sequential or reciprocal interdependencies, respectively. The latter case is more likely to be associated with external suppliers' involvement and, ultimately, with higher operational performance.
(Kolk and Fortanier, 2013)	Institutional theory	Results show a significantly negative relationship between the degree of internationalization and environmental disclosure, which is only partly mitigated by environmental governance and institutional quality at home and host countries. The relationship is only positive for firms in high-sensitivity sectors from high-standard countries. Findings are significant for the degree of internationalization; and non-significant for dispersion/spread
(Peña-Vinces and Delgado-Márquez, 2013)	Institutional theory	Green management exerts a positive influence on the performance of foreign entrepreneurial activities of Peruvian SMEs
(Wiengarten, Pagell and Fynes, 2013)	N/A	ISO 14000 certified companies found to have a higher level of investments in Environmental supply chain management practices than non-certified companies.
(Chan, 2013)	N/A	The results also indicated ten over-perceptions and three under-perceptions amongst hotel managers, implying that they may require a better understanding of customer expectations. Several demographic differences were also identified. Female hotel managers and customers were found to be more concerned with green hotel products and image. Furthermore, older hotel managers found to have reservations about specific green marketing strategies. Finally, younger customers become more concerned about environmental issues; and customers with higher education challenged whether hotels are genuinely innovative in developing green products and services.
(Zhu, Sarkis and Lai, 2013)	Institutional theory	Institutional pressures have driven the manufacturer adoption of internal Green supply chain management practices which in turn relate to their external GSCM practices adoption.
(Zhu and Geng, 2013)	Institutional theory	Chinese manufacturers implement Extended Supply Chain practices for Energy saving and Emissions reduction goals at a low level. Coercive, normative and mimetic drivers are generally weak while internal barriers are relatively higher.
(L. C. Leonidou et al., 2013)	Resource-based view, Industrial organization (IO) theory	The authors show that certain organizational resources (i.e., financial, physical, and experiential) and capabilities (i.e., shared vision, cross-functional coordination, and technology sensing/response) are conducive to the deployment of an eco-friendly export marketing strategy (comprising product, price, distribution, and promotional elements). Such a strategy is more evident for exporters of industrial against consumer goods as well as for firms that sell to developed against developing) countries.
(Pagell, Wiengarten and Fynes, 2013)	Institutional theory	The results indicate that managers do indeed respond to institutions when making investment decisions and that in some countries, there is a lack of such initiatives that potentially harm organisational and environmental outcomes.
(Aguilera-Caracuel *et al.*, 2012)	Institutional theory and Resource-based View	High environmental, the institutional distance between headquarters' and subsidiaries' countries deters the standardization of environmental practices. On the other hand, high-profit headquarters are willing to

Citation	Theory	Findings
		standardize their environmental practices, rather than taking advantage of countries with lax environmental protection to undertake more pollution-intensive activities. Finally, headquarters' financial performance also imposes a moderating effect on the relationship between the environmental, institutional distance between countries and environmental standardization within the multinational company
(Narasimhan and Schoenherr, 2012)	Resource-based view	Environmental management practices can result in process improvements impacting actual quality and create a favourable image of the company among customers, enhancing the perceived quality of the firm's products.
(Wiengarten and Pagell, 2012)	N/A	Investments in environmental practices have a significantly higher pay-off rate in terms of cost, delivery and flexibility performance in the copresence of high levels of investments in quality practices.
(Aguilera-Caracuel, Hurtado-Torres and Aragón-Correa, 2012)	N/A	A more complex experience of international environmental diversification is positively related to a firm's proactive environmental strategy. Furthermore, organisational learning capability moderates the positive relationship between international environmental diversification and environmental proactivity.
(Liu, Kasturiratne and Moizer, 2012)	N/A	The internal driver on top of the interviewees' list was to improve the company's sustainable supply chain capabilities to match the green customer's expectations and demand to achieve the best possible overall business performance. However, the external driver on the top was government regulations rather than green customer's demand. Interviewees also expressed their concerns about internal and external obstacles to implement the multi-integration of green marketing into Sustainable chain management practices.
(Chan *et al.*, 2012)	Institutional theory	First, it demonstrates that while both internal and external environmental orientations exert a positive and significant influence on the practice of green purchase and customer cooperation, internal environmental orientation further serves as a significant driver for investment recovery. Second, it shows that the practice of these three major Green supply chain management activities, in turn, significantly enhances corporate performance. Last, the study reveals that competitive intensity strengthens the positive influence of customer cooperation on corporate performance
(Hsieh, 2012)	N/A	Only 46 per cent of the selected hotel companies used web pages to post information related to environmental issues on their public web sites.
(Gallego-Álvarez, Rodríguez-Domínguez and García-Sánchez, 2011)	Legitimacy theory	Companies with higher environmental performance disclose a larger volume of information on opportunities arising from climate change on their websites than companies with lower environmental performance. Likewise, companies from countries that have ratified the Kyoto Protocol disclose a higher volume of information on greenhouse gas emissions on their websites, compared to companies from countries which have not ratified it.
(González-Benito, Lannelongue and Queiruga, 2011)	Stakeholder theory	Stakeholder pressure increases the perception of urgency, the availability of an Environmental management system (EMS) increases the perception of feasibility, and both are important for generating a response by the organization

Citation	Theory	Findings
(Qi *et al.*, 2011)	Stakeholder theory	signalling to foreign customers and community stakeholders play a dominant role in encouraging the diffusion of ISO 14001 certification. However, as an important organizational stakeholder, foreign investors have shown no significant effect on the diffusion of ISO 14001 in China.
(Leonidou *et al.*, 2011)	N/A	The results indicate 1) A growing appreciation by international firms of the role of advertising in developing a green image. This is particularly true of large multinational corporations in industries often accused of polluting the environment 2) Greater focus of green advertisements on product-oriented claims than on process-oriented, image-oriented, or environmental fact-based claims, denotes
(Sotorrío and Sánchez, 2010)	N/A	There is a negative correlation between corporate reputation in Spain and differences in the average degree of disclosure for global and local audiences. This association is stronger when the disclosure concerns employee-related and environmental information than when it is community information.
(First and Khetriwal, 2010)	N/A	The results do not provide conclusive evidence for whether consumers reward environmental leaders and punish environmental laggards by converting their environmental opinions into brand perceptions and purchasing decisions.
(Darnall, Henriques and Sadorsky, 2010)	Stakeholder theory	Smaller firms are more responsive to value-chain, internal, and regulatory stakeholder pressures on adopting environmental strategies.
(Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010)	NRBV	The results show a relationship between advanced environmental strategies and export intensity for the sampled firms. However, the size of a firm plays a role in this relationship, as the relationship between advanced environmental strategies and exports is stronger with an increase in SMEs' size.
(Chan, 2010)	N/A	Internal environmental orientation positively influences environmental corporate (but not marketing) strategies, and external environmental orientation positively influences both. These two types of environmental strategy are, in turn, found to affect firm performance positively. Regulatory stakeholder influence is found to exert a direct effect on external environmental orientation. Moreover, it is found to moderate the relationship between environmental orientation and environmental strategy positively.
(Albino, Balice and Dangelico, 2009)	N/A	The adoption of different environmental strategic approaches is higher for green product developers than for green product non-developers. Moreover, the most implemented strategic approaches for green product developers vary depending on the economic sector, while more homogeneous behaviour is found from the geographical perspective.
(Wagner, 2009)	N/A	The study indicates that environmental management systems are associated with process innovations, but that this is moderated by the interaction of environmental management system implementation with the country location. Also, country-specific national cultures and regulatory regimes moderate the association of environmental management system implementation with environmental products and process innovations, respectively.
(Reid and Toffel, 2009)	Social activism theory, Institutional change theory	In the domain of private politics, shareholder resolutions filed against a firm and others in its industry, increase a firm’s propensity to engage in practices consistent with the related social movement aims.

Citation	Theory	Findings
		Similarly, in the realm of public politics, threats of state regulations targeted at a firm's industry as well as regulations targeted at other industries increase the likelihood that the firm will engage in green practices.
(Wagner, 2008)	N/A	The study finds that environmental management systems are associated with process innovations. However, the study does not find that environmental management systems are associated with product innovations. For product innovations, mainly information of consumers and eco-labelling activities show a positive association. Market research on the potential of environmental innovations positively relates to both process and product innovations. Importantly, firm size is not found to affect a firm's probability of carrying out environmental products or process innovations.
(Martin-Tapia, Aragon-Correa and Senise-Barrio, 2008)	Resource-based view	A proactive environmental strategy is positively related to a company's export performance. The authors also find that general uncertainty imposes a moderating effect on the relationship between proactive environmental strategies and export intensity for SMEs.
(Darnall, Henriques and Sadorsky, 2008)	Institutional theory and Resource-based View	Facilities that are motivated to adopt more comprehensive Environmental management systems (EMSs) because of their complementary resources and capabilities, such as export orientation, employee commitment and environmental RandD, (as opposed to institutional pressures) observe greater overall facility-level business performance.
(Epstein and Roy, 2007)	N/A	The study's results revealed that most companies had adopted a global environmental standard to govern their worldwide business activities supported by strong central controls over environmental performance evaluation of facilities and decisions regarding environmental programs development. Results also revealed that there are limited links between organizational complexity and most aspects of the environmental strategy.
(Montabon, Sroufe and Narasimhan, 2007)	N/A	The results of this study demonstrate significant and positive relationships between Environmental management practices and measures of performance.
(Jose and Lee, 2007)	Stakeholder theory	The evidence from some of the world's largest companies' websites shows that multinational companies are being more environmentally sensitive today than they have been in the past.
(Cole, Elliott and Shimamoto, 2006)	N/A	Growth on international trade and Foreign Direct Investment increase firms environmental awareness and both regulatory and non-regulatory factors play a role in a firm's decision to quantify and manage the impact their activities have on the environment.
(Bellesi, Lehrer and Tal, 2005)	N/A	Firms improve their competitiveness abroad by receiving ISO 14001 certification.
(Chan, 2005)	NRBV	The results remind Foreign-invested enterprises in China of the opportunities to enhance corporate environmental and financial performance by adopting environmental strategies. Various regression and multi-group analyses conducted in this study further reveal significant moderating influences of perceived environmental uncertainties, operating mode, and firm size on the process of achieving company-wide ecological sustainability.

Citation	Theory	Findings
(Christmann, 2004)	Resource dependence theory	MNCs standardize different environmental policy dimensions in response to pressures from different external stakeholders. MNC characteristics also affect environmental policy standardization. Findings demonstrate that the nature of stakeholder demands affects firms' responses to stakeholder pressures.
(Cormier, Gordon and Magnan, 2004)	Legitimacy theory, Stakeholder theory	There is a relationship between environmental managers' attitudes toward various stakeholder groups and how those managers respond to the stakeholders via the decision to disclose and the actual disclosures made.
(Ramus, 2002)	N/A	Results show that both environmental policies and supportive supervisory behaviours can increase the probability that employees will try environmental initiatives
(King and Shaver, 2001)	N/A	Foreign-owned establishments generate more waste yet manage more waste than U.S.-owned establishments. Also, both domestic and foreign-owned firms generate more waste if they operate multiple facilities across multiple jurisdictions in the United States
(Christmann and Taylor, 2001)	Strategic network theory, Pollution haven	Globalization has positive environmental effects because global ties increase self-regulation pressures on firms in low-regulation countries. Precisely multinational ownership, multinational customers, and exports to developed countries increase self-regulation of environmental performance.

Appendix 4: Scope of Research Data Extraction, Chapter 4

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Yu *et al.*, 2020)	3	1	1	1	2	1	1	1,2,3	3
(Aigbedo, 2019)	7	6	4	4	2,3	2	1	1	1
(Jin *et al.*, 2019)	3	1	1	4	2,3	2	1	1	1
(Shaharudin *et al.*, 2019)	3	1	1	4	2	1	1	3	1
(Rudawska, 2019)	2	1	4	1	2	1	1	3	1
(Gangi *et al.*, 2019)	7	6	4	1	3	1	1	1	1
(Todaro *et al.*, 2019)	7	6	4	4	2	1	1	1,2,3	3
(Banerjee, Gupta and Mudalige, 2019)	7	6	4	4	1,2,3	3	1	1,2,3	3
(Theoharakis, Bicakcioglu and Tanyeri, 2019)	1	1	1	1	2	1	1	3	1
(Ellimäki *et al.*, 2019)	1,2,3, 4,5,6,7	6	4	1	1,2,3	3	1	1	1
(Montalbano and Nenci, 2019)	6	1	4	4	1,2	2	1	2,3	2
(Leyva-de la Hiz, Hurtado-Torres and Bermúdez-Edo, 2019)	1,2,3	3	4	1	2	1	1	1	1
(Pucheta-Martínez and Gallego-Álvarez, 2018)	1,2,3,4	4	4	4	1,2,3	3	1	1,2,3	3
(Ardito and Dangelico, 2018)	7	6	4	4	2,3	2	1	1	1

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Testa *et al.*, 2018)	1, 2, 3, 5	4	4	4	1,2,3	3	1	1,2,3	3
(Testa, Boiral and Iraldo, 2018)	2	1	4	1	1,2,3	3	1	1,2,3	3
(Auer, 2018)	1,2,3,4,6	5	4	4	1,2,3	3	1	1,2,3	3
(Akhtar *et al.*, 2018)	2, 5	2	2	4	2	1	1	3	1
(Joo, Seo and Min, 2018)	3	1	1	1	2	1	1	3	1
(Jiang *et al.*, 2018)	3	1	1	4	1,2,3	3	1	2,3	2
(Kang and He, 2018)	3	1	1	4	2	1	1	2,3	2
(Sinnandavar, Wong and Soh, 2018)	3	1	1	4	3	1	1	1	1
(Shi and Xu, 2018)	3	1	1	1	2	1	1	1,2	2
(Miras-Rodríguez, Machuca and Escobar-Pérez, 2018)	7	6	4	4	2	1	1	1	1
(Q. Li *et al.*, 2018)	3	1	1	1	2	1	1	1	1
(Chen, Ngniatedema and Li, 2018)	7	6	4	1	1,2,3	3	1	1	1
(Al-Ghwayeen and Abdallah, 2018)	3	1	1	4	2	1	1	3	1
(Kawai, Strange and Zucchella, 2018)	1, 2	2	4	1	2	1	1	1	1

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Joo, Seo and Min, 2018)	3	1	1	1	2	1	1	3	1
(Liu *et al.*, 2018)	1,2,3	3	4	1	2	1	1	1,2,3	3
(Bıçakcıoğlu, 2018)	2	1	1	1	2	1	1	3	1
(Hendriks, Slangen and Heugens, 2018)	1,2,3,4,5,6,7	6	4	4	3	1	1	1	1
(Symeou, Zyglidopoulos and Williamson, 2018)	1,2,3,4	4	4	1	1	1	1	1	1
(Macchion *et al.*, 2017)	2	1	1	4	2	1	1	3	1
(Vastola, Russo and Vurro, 2017)	1,2,3,6	4	4	1	1,2,3	3	1	1,2,3	3
(Delgado-Márquez and Pedauga, 2017)	7	6	4	4	1,2,3	3	1	1	1
(Tsai and Liao, 2017)	3	1	1	4	2	1	1	3	1
(Czerny and Letmathe, 2017)	2	1	4	1	1,2,3	3	1	1,2,3	3
(Li, Zhou and Wu, 2017)	3	1	1	4	2	1	1	3	1
(Corrocher and Solito, 2017)	2	1	4	4	1,2,3	3	1	1,2,3	3
(Antonietti, De Marchi and Di Maria, 2017)	2	1	1	4	2	1	1	3	1
(Baral and Pokharel, 2017)	7	6	4	4	1,2,3	3	1	1,2,3	3

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Haleem, Farooq and Wæhrens, 2017)	1, 2, 3, 6	4	4	4	2	1	1	1,2	2
(Sadovnikova and Pujari, 2017)	1	1	1	4	1,2,3	3	1,3	1,2,3	3
(Achabou, Dekhili and Hamdoun, 2017)	4	1	1	4	1	1	1	3	1
(Riikkinen, Kauppi and Salmi, 2017)	2	1	4	1	2,3	2	1	1,2	2
(Li and Zhou, 2017)	1	1	1	2	2	1	1	1	1
(Chen, Ong and Hsu, 2016a)	7	6	4	4	2	1	1	1	1
(Chen, Ong and Hsu, 2016b)	1, 2, 3	3	4	1	2	1	1	1	1
(Kim, Moon and Yin, 2016)	3	1	1	1	2	1	1	1	1
(Lin and Ho, 2016)	1, 2, 3, 4, 6	5	4	4	2	1	1	1	1
(Daddi *et al.*, 2016)	2	1	4	1	1,2,3	3	1	1,2,3	3
(Perez-Valls, Cespedes-Lorente and Moreno-Garcia, 2016)	2	1	4	4	3	1	1	1	1
(Bu and Wagner, 2016)	3	1	1	1	1,2,3	3	1	1	1
(Chan and Ma, 2016)	3	1	1	4	2	1	1	3	1
(Amran *et al.*, 2016)	3	1	4	1	1,2,3	3	1	1	1

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Sancha, Wong and Thomsen, 2016)	3	1	1	4	2	1	1	3	1
(Del Bosco and Misani, 2016)	1,2,3,4,5,6,7	6	4	1	4	0	1	1	1
(Marquis, Toffel and Zhou, 2016)	1,2,3,4	4	4	4	4	0	1	1	1
(Martínez-Ferrero and Frías-Aceituno, 2015)	1, 2, 3	3	4	4	1,2,3	3	1	1,2,3	3
(Misani and Pogutz, 2015)	1,2,3,5,6	5	4	4	1,2,3	3	1	1	1
(Wagner, 2015)	2	1	2	4	1,2,3	3	1	1,2,3	3
(Wu, 2015)	3	1	1	1	2	1	1	1	1
(Leonidas C Leonidou *et al.*, 2015)	2	1	1	1	2	1	1	3	1
(L. C. Leonidou et al., 2015)	7	6	4	1	3	1	1	1	1
(Shah, 2015)	6	1	2	1	1	1	1	1	1
(Mengze and Wei, 2015)	1, 3, 5	3	4	2	3	1	1	1	1
(Tatoglu *et al.*, 2014)	2	1	1	1	1,2,3	3	1	1	1
(Dam and Petkova, 2014)	4	1	4	4	1,2,3	3	1	1	1
(Aguilera-Caracuel, Fedriani and Delgado-Márquez, 2014)	1, 2	2	4	4	1,2	2	1	1	1

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Ortas, Moneva and Álvarez, 2014)	7	6	4	3	1,2,3	3	1	1,2,3	3
(Albornoz *et al.*, 2014)	6	1	4	4	1,2	2	1	1,3	2
(Soltmann, Stucki and Woerter, 2014)	1,2,3	3	4	4	2	1	1,4	1	1
(Galeazzo, Furlan and Vinelli, 2014b)	7	6	4	4	2	1	1	1	1
(Zeriti *et al.*, 2014)	2	1	1	1	2	1	1	3	1
(Leonidou *et al.*, 2014)	7	6	4	4	2	1	3	1	1
(Galeazzo, Furlan and Vinelli, 2014a)	2	1	1	1	2	1	1	1	1
(Kolk and Fortanier, 2013)	7	6	4	1	1,2,3	3	1	1	1
(Peña-Vinces and Delgado-Márquez, 2013)	6	1	1	4	1,2	2	1	1	1
(Wiengarten, Pagell and Fynes, 2013)	1,2	2	4	4	2	1	1	1,2,3	3
(Chan, 2013)	3	1	1	4	3	1	1, 2	1	1
(Zhu, Sarkis and Lai, 2013)	3	1	1	1	2	1	1	1,2,3	3
(Zhu and Geng, 2013)	3	1	1	4	2	1	1	3	1
(L. C. Leonidou et al., 2013)	2	1	1	4	2	1	1	3	1
(Pagell, Wiengarten and Fynes, 2013)	1,2,3,6	4	4	1	2	1	1	1,2,3	3

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Aguilera-Caracuel *et al.*, 2012)	1,2	2	4	4	1,2	2	1	1	1
(Narasimhan and Schoenherr, 2012)	2, 3, 5	3	4	3	2	1	1	1,2,3	3
(Wiengarten and Pagell, 2012)	2, 3, 5, 6	4	4	1	2	1	1	1,2,3	3
(Aguilera-Caracuel, Hurtado-Torres and Aragón-Correa, 2012)	1, 2, 3, 4, 5, 6	6	4	1	2	1	1	3	1
(Liu, Kasturiratne and Moizer, 2012)	2	1	1	1	2	1	1	1	1
(Chan *et al.*, 2012)	3	1	1	4	2	1	1	1	1
(Hsieh, 2012)	1, 2, 3, 6	4	4	4	3	1	3	1	1
(Gallego-Álvarez, Rodríguez-Domínguez and García-Sánchez, 2011)	1, 2, 3, 5, 6	5	4	1	1,2,3	3	3	1	1
(González-Benito, Lannelongue and Queiruga, 2011)	1,2,3	3	4	4	2	1	1	1	1
(Qi *et al.*, 2011)	3	1	1	4	1,2,3	3	1	1,3	2
(Leonidou *et al.*, 2011)	1, 2, 3	3	4	4	1,2	2	3	1	1
(Sotorrío and Sánchez, 2010)	2	1	1	4	1,2,3	3	1	1	1
(First and Khetriwal, 2010)	7	6	1	4	2,3	2	1	1	1

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Darnall, Henriques and Sadorsky, 2010)	1,2	2	4	2	2	1	1	3	1
(Martín-Tapia, Aragón-Correa and Rueda-Manzanares, 2010)	2	1	1	1	2	1	1	3	1
(Chan, 2010)	3	1	1	1	2	1	1	1	1
(Albino, Balice and Dangelico, 2009)	1, 2, 3	3	4	3	1,2,3	3	3	1	1
(Wagner, 2009)	2	1	4	4	2	1	1	1,2,3	3
(Reid and Toffel, 2009)	1,2,3,4,5,6,7	6	4	4	1,2,3	3	1	1	1
(Wagner, 2008)	2	1	4	4	1,2,3	3	1	1,2,3	3
(Martin-Tapia, Aragon-Correa and Senise-Barrio, 2008)	2	1	1	4	2	1	1	3	1
(Darnall, Henriques and Sadorsky, 2008)	1,2	2	4	1	2	1	1	3	1
(Epstein and Roy, 2007)	1	1	1	4	2	1	1	1	1
(Montabon, Sroufe and Narasimhan, 2007)	1,2,5	3	4	4	1,2,3	3	1	1	1
(Jose and Lee, 2007)	1, 2, 3	3	4	4	1,2,3	3	1	1	1
(Cole, Elliott and Shimamoto, 2006)	3	1	1	4	2,3	2	1	1,3	2

Citation	Focus region	Number of Focus Regions	Host Countries involved	Number of Industries Covered	Economic Sector Classification	Number of Sectors	Unit of Analysis	Firm Type	Number of firm types
(Bellesi, Lehrer and Tal, 2005)	1, 2	2	4	4	2	1	1	3	1
(Chan, 2005)	3	1	1	3	2	1	1	1	1
(Christmann, 2004)	1	1	1	2	2	1	1	1	1
(Cormier, Gordon and Magnan, 2004)	1, 2	2	3	1	1,2	1	1	1	1
(Ramus, 2002)	1,2	2	4	4	2	1	1	1	1
(King and Shaver, 2001)	1	1	1	4	2	1	1	1,2	2
(Christmann and Taylor, 2001)	3	1	1	1	4	0	1	1,3	2

Appendix 5: Manuscript features data extraction, Chapter 4

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Yu *et al.*,	1	1	2	1	1,2,3	3	2	1	1	1	1	0
(Aigbedo, 2019)	1	1	1	3f	0	0	9	1	0	0	N/A	1
(Jin *et al.*,	1	1	2	1	7	0	4	3	1	1	1	0
(Shaharudin *et al.*,	1	1	2	1	2	1	2	3	1	1	0	0
(Rudawska,	3	1	4	2	1,2,3,5	4	9	0	1	0	0	0
(Gangi	1	2	2	3b	0	0	9	1	0	0	N/A	1
(Todaro *et al.*,	1	1	3	1	4	1	1	1	1	1	1	1

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Banerjee, Gupta and	1	2	4	3b, 3e	0	0	9	1	0	1	N/A	1
(Theoharakis, Bicakcio	1	1	2	1	2,3	2	3	3	1	1	1	0
(Ellimäk	3	2	3	3b,3e	0	0	9	1	1	0	N/A	0
(Montal	1	2	4	3e	0	0	9	1	0	0	N/A	0
(Leyva-de la Hiz,	1	1	1	3e,3f	0	0	9	1	0	0	N/A	0
(Pucheta-Martínez	1	1	4	3b	0	0	9	1	0	0	N/A	0
(Ardito and	1	1	3	3f	0	0	9	1	0	0	N/A	1
(Testa *et al.*, 2018)	1	2	4	3b	0	0	9	1	0	1	N/A	1
(Testa, Boiral	1	1	2	1	2	1	4	1	0	0	1	1
(Auer, 2018)	1	1	4	3f	0	0	9	1	1	1	N/A	1
(Akhtar *et al.*, 2018)	1	1	2	1	1	1	1	3	1	1	1	0
(Joo, Seo and	1	1	2	1	2	1	2	1	1	1	1	0
(Jiang *et al*	1	1	3	1	1, 2	2	1	1	1	1	1	0
(Kang and He, 2018)	1	1	2	1,3e	1,2	2	2	1	1	1	1	1
(Sinnandavar, Wong	1	1	2	1	1,2	2	4	3	1	1	1	0
(Shi and Xu, 2018)	1	1	4	3e	0	0	9	1	0	1	N/A	1
(Miras-Rodríguez,	1	1	2	1	2,4	2	9	3	0	1	1	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Q. Li *et al.*, 2018)	1	2	2	3e	0	0	9	1	0	0	N/A	1
(Chen, Ngniatedema and	1	1	3	2	0	0	9	1	0	0	0	0
(Al-Ghwayeen and	1	1	2	1	2	1	4	3	1	1	0	0
(Kawai, Strange and	1	1	2	1	1	1	1	3	1	1	1	0
(Joo,	1	1	3	1	2,4	2	4	3	1	1	1	0
(Liu *et al.*, 2018)	1	1	2	1	2	1	2	3	1	1	1	0
(Bıçakcıoğlu, 2018)	2	1	1	1	2	1	9	2	0	0	0	0
(Hendriks, Slangen	1	2	2	3e,3f	0	0	9	1	0	1	N/A	1
(Symeou, Zyglidop	1	2	3	3b,3e	0	0	9	1	0	1	N/A	1
(Macchion *et al.*, 2017)	1	1	2	1	2	1	3	1	1	1	1	0
(Vastola, Russo and	1	2	4	3b	0	0	9	1	0	0	N/A	1
(Delgado-Márquez	1	2	4	3f	0	0	9	1	0	0	N/A	0
(Tsai and Liao,	1	1	4	3e	0	0	9	1	0	0	N/A	0
(Czerny and Letmath	1	1	3	1,3f	5	1	1	3	1	1	0	0
(Li, Zhou and Wu,	1	1	3	1	2,5	2	3	1	1	1	1	0
(Corrocher and Solito,	1	1	4	2	0	0	9	1	0	0	0	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Antonietti, De Marchi	1	1	4	2	0	0	9	1	0	0	0	1
(Baral and Pokharel	1	1	4	3a	0	0	9	1,2	0	0	N/A	0
(Haleem, Farooq and	1	1	3	1	2	1	9	1	1	1	0	0
(Sadovnikova and Pujari,	1	2	2	3c,3e, 3f	0	0	9	1	0	0	1	1
(Achabou, Dekhili	1	1	1	1	1,2	2	2	2	0	0	0	0
(Riikkinen, Kauppi	1	1	3	1	2	1	4	3	1	1	1	0
(Li and Zhou, 2017)	1	2	4	3e	0	0	9	1	0	0	1	1
(Chen, Ong and Hsu,	1	1	1	3a	0	0	9	1	1	1	N/A	1
(Chen, Ong and Hsu,	1	2	1	3a,3b	0	0	9	1	1	1	N/A	0
(Kim, Moon and Yin,	1	2	4	3e	0	0	9	1	0	0	N/A	0
(Lin and Ho, 2016)	1	1	1	1,3b,3e,3f	1	1	4	1	0	0	0	1
(Daddi *et al.*, 2016)	1	1	2	1	7	0	1	1	1	1	1	0
(Perez-Valls, Cespede	1	1	4	1	1	1	1	3	1	1	0	0
(Bu and Wagner, 2016)	1	2	3	3c	0	0	9	1	0	0	N/A	1
(Chan and Ma, 2016)	1	1	3	1	1	1	3	1	1	1	1	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Amran *et al.*, 2016)	1	1	2	3a	0	0	9	1	1	0	N/A	0
(Sancha, Wong and	1	1	2	1	1	1	2	3	1	1	1	0
(Del Bosco and	1	2	4	3b	0	0	9	1	0	0	N/A	1
(Marquis, Toffel and	1	2	4	3e, 3f,3b	0	0	9	1	0	0	N/A	1
(Martínez-Ferrero	1	2	4	2	0	0	9	1	0	0	0	1
(Misani and Pogutz,	1	2	2	3a,3b	0	0	9	1	0	0	N/A	0
(Wagner, 2015)	1	1	4	1	2,4	2	2	1	0	0	1	0
(Wu, 2015)	1	1	4	3e	0	0	9	1	1	1	N/A	1
(Leonidas C Leonido	1	1	2	1	2	1	4	3	1	1	1	0
(L. C. Leonidou et al.,	1	1	2	1	2	1	4	3	1	1	1	0
(Shah, 2015)	1	1	3	1	2	1	0	1	1	1	1	0
(Mengze and Wei, 2015)	1	1	2	3a	0	0	9	1	0	0	N/A	0
(Tatoglu *et al.*, 2014)	1	1	2	1	1	1	1	1	1	1	1	0
(Dam and Petkova,	1	1	1	3a,3b	0	0	9	1	**0**	**0**	**1**	**1**
(Aguilera-Caracuel	1	1	2	3e,3f	0	0	9	0	**1**	**0**	**N/A**	**0**

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Ortas, Moneva and	1	2	4	3b	0	0	9	1	1	0	N/A	1
(Alborno z *et al.*, 2014)	1	1	4	1	1,2	2	4	1	**0**	**1**	**1**	**1**
(Soltman n, Stucki and	1	2	4	3b, 3e	0	0	9	1	0	0	N/A	1
(Galeazz o, Furlan and	1	1	1	2	2,4	2	9	1	**1**	**1**	**0**	**0**
(Zeriti *et al.*, 2014)	1	1	2	1	2	1	3	3	1	1	1	0
(Leonido u *et al.*, 2014)	1	1	3	2	0	0	9	0	1	1	N/A	0
(Galeazz o, Furlan and	2	1	1	1	2,4	2	9	0	**0**	**0**	**1**	**0**
(Kolk and Fortanier	1	1	2	3a,3f	0	0	9	1	**0**	**0**	**N/A**	**0**
(Peña-Vinces and	1	1	2	1	7	0	1	3	1	1	0	0
(Wienga rten, Pagell	1	1	4	1	2	1	9	0	1	1	0	0
(Chan, 2013)	1	1	1	1	2,6	2	1	0	1	1	0	0
(Zhu, Sarkis and Lai,	1	1	3	1	7	0	9	1	1	1	0	0
(Zhu and Geng, 2013)	1	1	3	1	7	0	4	1	1	0	0	0
(L. C. Leonido u et al.,	1	1	2	1	2	1	4	3	1	1	1	0
(Pagell, Wiengar ten and	1	1	4	1,2	2	1	9	1	1	1	1	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Aguilera-Caracuel	1	1	2	3e,3f	0	0	9	1	**0**	**0**	**N/A**	**0**
(Narasimhan and	1	1	3	2	0	0	9	1	1	1	1	0
(Wiengarten and Pagell,	1	1	4	2	0	0	9	0	1	1	1	0
(Aguilera-Caracuel	1	1	2	2,3f	0	0	9	1	1	0	1	0
(Liu, Kasturiratne and	2	1	1	2	2	1	9	0	0	0	0	0
(Chan *et al.*, 2012)	1	1	2	1	2	1	3	3	1	1	1	0
(Hsieh, 2012)	1	1	1	3d	0	0	9	2	1	1	N/A	0
(Gallego-Álvarez,	1	1	2	3d	0	0	9	1	0	1	N/A	0
(González-Benito,	1	1	4	1	2,4	2	1	1	**0**	**0**	1	**1**
(Qi *et al.*, 2011)	1	2	2	3e	0	0	9	1	0	0	N/A	1
(Leonidou *et al.*, 2011)	1	1	3	3d	0	0	9	1	1	1	N/A	0
(Sotorrío and Sánchez,	1	1	1	3f	0	0	9	0	**0**	0	N/A	**0**
(First and Khetriw	1	1	1	2	0	0	9	0	0	0	0	0
(Darnall, Henriques and	1	1	4	1	2	1	2	1	1	0	1	0
(Martín-Tapia, Aragón-	1	1	2	1	2	1	0	1	0	0	1	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Chan, 2010)	1	1	3	1	2	1	2	3	1	1	1	0
(Albino, Balice and	1	1	3	3a,3d	0	0	9	1	0	0	N/A	0
(Wagner, 2009)	1	1	4	1	2,4	2	2	1	1	1	1	0
(Reid and Toffel,	1	1	3	3b,3c, 3e	0	0	4	1	1	0	0	1
(Wagner, 2008)	1	1	4	1	7	0	2	1	0	1	1	0
(Martin-Tapia, Aragon-	1	1	2	1	1	1	0	1	1	1	0	0
(Darnall, Henriques and	1	1	4	1	7	0	9	1	1	1	1	0
(Epstein and Roy, 2007)	1	1	1	1	2	1	3	1	**0**	**0**	**0**	**0**
(Montabon, Sroufe	1	1	1	3a	0	0	9	1	1	1	N/A	0
(Jose and Lee, 2007)	1	1	2	3d	0	0	9	2	1	1	N/A	0
(Cole, Elliott and	1	1	3	2	0	0	4	1	0	0	0	1
(Bellesi, Lehrer and Tal,	1	1	2	1	1, 2,4	3	3	1	0	1	0	0
(Chan, 2005)	1	1	2	1	2	1	2	3	1	1	1	0
(Christmann, 2004)	1	1	4	1	1,2	2	2	1	1	1	1	0
(Cormier, Gordon and	1	1	1	1	4	1	2	1	0	0	0	0

Citation	Nature of	Time Dimension	Sample Size	Data Source	Key Informant	Number of Key	Response Rate	Statistical Analy	Reliability	Validity	Response Bias	Robustness
(Ramus, 2002)	1	1	3	1	5	1	2	1	0	0	0	0
(King and Shaver,	1	2	4	3e,3f	0	0	9	1	0	0	N/A	1
(Christmann and Taylor,	1	1	2	1	2	1	4	1	0	0	1	0

Appendix 6: Operationalisation of Study 2 Chapter 5 Constructs

	Construct	Item	Explanation
Drivers	Green Human Resource Management (Cantor, Morrow and Montabon, 2012; Renwick, Redman and Maguire, 2013)	Environment Management Team/CSR Sustainability committee	Does the company have an environmental management team? Does the company have a CSR committee or team?
		Environment Management Training	Does the company train its employees on environmental issues?
		Sustainability Compensation Incentives	Is the senior executive's compensation linked to CSR/HandS/Sustainability targets?
	Environmental Proactiveness	Environmental Partnerships	Does the company report on partnerships or initiatives with specialised NGOs, industry organisations, governmental or supra-governmental organisations, which are focused on improving environmental issues?
		Environmental Investments / Environmental Investment Initiatives	Does the company report on its environmental expenditures or does the company report to make proactive environmental investments to reduce future risks or increase future opportunities? /Does the company report on making proactive environmental investments or expenditures to reduce future risks or increase future opportunities?

		ISO 14000	Does the company claim to have an ISO 14000 or EMS certification?
		EMS	Does the company claim to have an EMS certification?
	Environmental Targeting/ Orientation	Targets Water Efficiency	Has the company set targets or objectives to be achieved on water efficiency?
		Targets Energy Efficiency	Has the company set targets or objectives to be achieved on energy efficiency?
		Targets Emissions	Has the company set targets or objectives to be achieved on emission reduction?
		Resource Reduction Target	Does the company set specific objectives to be achieved on resource efficiency?
		Environmental Restoration Initiatives	Does the company report or provide information on company-generated initiatives to restore the environment?
Environmental Strategies	Green Procurement	Environmental Materials Sourcing	Does the company claim to use environmental criteria (e.g., life cycle assessment) to source or eliminate materials?
		Environmental Supply Chain Management	Does the company use environmental criteria (ISO 14000, energy consumption,) in the selection process of its suppliers or sourcing partners?
		Policy Environmental Supply Chain	Does the company have a policy to include its supply chain in the company's efforts to lessen its overall environmental impact?
	Product Service Eco-Friendliness	Environmental Products	Does the company report on at least one product line or service that is designed to have positive effects on the environment or which is environmentally labelled and marketed?
		Product Impact Minimisation	Does the company report about take-back procedures and recycling programmes to reduce the potential risks of products entering the environment or does the company report about product features or services that will promote responsible and environmentally preferable use?
		Policy Sustainable Packaging	Does the company have a policy to improve its use of sustainable packaging?

		Product Responsibility Monitoring	Does the company monitor the impact of its products or services on consumers or the community more generally?
	Waste Emissions Management	Waste Reduction Initiatives	Does the company report on initiatives to recycle, reduce, reuse, substitute, treat or phase out total waste?
		Policy Emissions	Does the company have a policy to improve emission reduction?
		E-waste Reduction	Does the company report on initiatives to recycle, reduce, reuse, substitute, treat or phase out e-waste?
	Resource Efficiency	Policy Energy Efficiency	Does the company have a policy to improve its energy efficiency?
		Policy Water Efficiency	Does the company have a policy to improve its water efficiency?
		Green Buildings	Does the company report about environmentally friendly or green sites or offices?
		Resource Reduction Policy	Does the company have a policy for reducing the use of natural resources or to lessen the environmental impact of its supply chain?

Appendix 7: Ordinal regression analysis results, Chapter 5

Constructs	Green Procurement		Product Service Eco-Friendliness		Waste/ Emissions Management		Resource Efficiency	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Controls								
Type of Business	-.739**	-.160	.317	1.266**	-1.193**	.456	-.728**	-.456
Revenues (log)	.596**	.382*	.259	.166	.435**	.815**	.626**	.643**
Firm Age (log)	.257	.005	.204	.061	.688**	.497	.392**	.620**
Main Effect								
GHRM		1.976**		1.533*		3.047**		3.730**
Environmental Proactiveness		5.020**		3.226**		9.179**		2.726**

Environmental Orientation		1.547**		.660		1.852**		2.486**
Link Function		Logit		Logit		Cauchit		Logit
Assumption of Parallel Lines		Not Violated		Violated		Not Violated		Violated
Nagelkerke R^2	.25	.534	.098	.252	.268	.626	.337	.661

Note: Unstandardized Coefficients are reported *p<0.1, **p<0.05

Appendix 8: Environmental strategy performance and financial performance (Robustness for Alternative financial indicators) Chapter 5

Construct	ROIC		ROIC/WACC	
	Model1	**Model 2**	**Model1**	**Model 2**
Constant	-.064	-.02	1.474	1.014
Revenues (Log)	.009	.007	.035	.056
Leverage	-.010**	-.010**	-.223**	-.218**
Firm Age	-.004	-.009	.024	-.058
Green-Procurement		-.053**		-1.652**
Product/Service Eco-Friendliness		.104**		2.364**
Waste Emissions Management		-.045		-1.222
Resource Efficiency		.069**		1.702*
R^2	.107	.230	.069	.177
R^2 Change		.124		.108
F-model	3.778**	3.89**	2.281*	2.731**
Durbin Watson		1.867		2.059

Unstandardized Coefficients are reported *p<0.1, **p<0.05

Appendix 9: Construct Operationalisation, Chapter 6

Construct	**Item**	**Explanation**
Green Corporate Governance	Environment Management Team	Does the company have an environmental management team?
	Environment Management Training	Does the company claim to provide regular staff and business management training for its managers?
	Sustainability Compensation Incentives	Is the senior executive's compensation linked to CSR/HandS/Sustainability targets?
Quality Assurance Policies	ISO 14000	Quality Management System Name
	ISO 9000	

	EMS	

Appendix 10: 3 Rs Strategy Construct Operationalisation with examples of application in the hospitality industry for each item, Chapter 6

Item	Definition	Examples of Application
Eco-Design Product	Does the company report on specific products which are designed for Reuse, recycling or the reduction of environmental impacts?	• Reuse solid waste such as furniture, appliances, service items and amenities
Product Impact Minimization	Does the company reports about take-back procedures and recycling programmes to reduce the potential risks of products entering the environment or does the company report about product features or services that will promote responsible and environmentally preferable use	• Reduce chemical, food and solid waste • Reuse food and solid waste
Resource Reduction Policy	Does the company have a policy for reducing the use of natural resources or to lessen the environmental impact of its supply chain?	• Improve the energy efficiency of the buildings • Use smart energy management systems related to temperature or lighting • Have a linen or towel reuse plan
Land Environmental Impact Reduction	Does the company report on initiatives to reduce the environmental impact on land owned, leased or managed for production activities or extractive use?	• Improve the energy efficiency of the buildings • Use renewable energy sourced electricity
Water Technologies	Does the company develop products or technologies that are used for water treatment, purification, or that improve water use efficiency?	• Reduce stormwater runoff • Use smart water management systems • Treating and reusing the wastewater
Take-Back and Recycling Initiatives	Does the company report about take-back procedures and recycling programs to reduce the potential risks of products entering the environment?	• Use of furniture or beddings made from reused or recycled materials. • Building establishments with easily recyclable materials in the future and recycles building elements when buildings are rehabilitated • Recycle paper, glass, cardboard, plastic, metal and hazardous waste
Policy Sustainable Packaging	Does the company have a policy to improve its use of sustainable packaging?	• Prioritize reusable and durable containers for packaging • Use biodegradable or reusable packaging