Strategic Corporate Social Responsibility in the Energy Sector

A Study of the Impact of SCSR on Energy Companies

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A Study of the Impact of SCSR on Energy Companies

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Research proposal for the PhD Degree in Environment and Natural Resources

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Abstract

The Sustainable Development Goals (SDGs) along with the 2015 Paris Agreement have created an additional pressure on the energy sector to have a more responsible approach to business strategies. This pressure is particularly relevant for energy companies which will have to produce *affordable energy for all* while remaining competitive. Traditionally, the best way to do so would be by improving the company's environmental performance and energy efficiency focusing mainly on cost savings. While this approach would seem correct it would fall short from the holistic aim of the SDGs, in particular from the Sustainable Development Goal 7 (SDG-7), to *ensure access to affordable, reliable, sustainable and modern energy for all*. Furthermore, the relevance of addressing SDG-7 through a holistic and strategic approach is that this goal can be linked to most of the other SDGs and, as expressed by the United Nations, it is crucial for achieving most of them (United Nations, 2017).

With this in mind, this research highlights the relevance of addressing the SDG-7 through a holistic business approach that can be achieved by the implementation of Strategic Corporate Social Responsibility (SCSR) as defined by Chandler and Werther (2014). To do so, this study contextualizes SCSR in the energy sector by providing an insight to its implementation in different areas of the energy sector (renewables, nuclear, and fossil fuels). This will allow to evaluate the impact of SCSR on the environmental performance and energy efficiency of the selected energy companies and explore if there is a positive pattern after its implementation.

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1 Objective

The main objective of this research is to analyze the impact of Strategic Corporate Social Responsibility (SCSR) on energy companies and to explore how it can help improve the sustainability practices of the energy sector. Correspondingly, this study has secondary objectives that complement each other. These are:

1. To determine the drivers behind SCSR implementation for energy companies.
2. To determine the barriers and limitations for SCSR implementation for energy companies.
3. To evaluate the relationship between SCSR implementation and the energy efficiency and environmental performance of energy companies as well as its impact on the firm's KPIs.
4. To explore the potential of SCSR for addressing the Sustainable Development Goal 7, to *ensure access to affordable, reliable, sustainable and modern energy for all*.

2 Research Questions

The purpose of analyzing the impact of SCSR on the energy sector is to answer the following research question: "To what extent does Strategic Corporate Social Responsibility implementation impact the environmental performance and energy efficiency of energy companies?" Additional questions were addressed in order to further explore the topic:

1. What are the drivers behind Strategic Corporate Social Responsibility implementation in the energy sector?
2. What are the barriers and limitations for energy companies for the implementation of Strategic Corporate Social Responsibility?
3. How can Strategic Corporate Social Responsibility help in achieving the objectives of the Sustainable Development Goal 7?
4. How can Strategic Corporate Social Responsibility help the energy sector reduce its dependence on fossil fuels?

3 Context and relevance

In 2015, the international community reached the Paris Agreement with the aim of establishing shared goals and defining a common strategy to address the pressing challenges of the 21st century, most of which can be linked to climate change. As a result, the new sustainable development agenda follows the Sustainable Development Goals[1] (SDGs) which were defined along with the Paris Agreement. From them, it is important to realize that the Sustainable Development Goal number 7 (SDG-7), to *ensure access to affordable, reliable, sustainable and modern energy for all*, can be linked to most of the SDGs and is in fact crucial for achieving almost all of them (United Nations, 2017).

Accordingly, addressing the SDG-7 and its specific targets can have a positive impact in advancing towards the fulfillment of other SDGs. For example, increasing the share of renewable energy in the global scale can help reduce the use of fossil fuels and hence reduce their environmental impact; ensuring affordable, reliable and modern energy services for all will indeed improve the quality of life of the 1.06 billion people that still live without electricity[2]; providing access to clean fuels and technologies for cooking will help reduce the health risks of more than 3 billion people that still cook without clean fuels and efficient technologies[3].

Given this context, it is clear that achieving the SDG-7 by 2030 represents a relevant challenge that needs to be addressed with a holistic approach. This translates into a significant test not only for policy makers, but also for energy companies which will have to adapt their strategies accordingly. The first step for energy companies is to explore new business schemes that will allow them to address the specific targets of the SDG-7 while remaining competitive.

To do so, energy companies could look at the implementation of Corporate Social Responsibility (CSR) which has the potential of providing benefits to society while

[1] For the further information on the Sustainable Development Goals refer to:

http://www.un.org/sustainabledevelopment/sustainable-development-goals/

[2] Data obtained from the "Progress of Goal 7 in 2017", retrieved the 1st of November 2017 from https://sustainabledevelopment.un.org/sdg7

[3] Idem as 3.

increasing the company's competitiveness (Porter & Kramer, 2006). Likewise, CSR policies can have a positive impact on the environmental performance of corporations (see: (European Commission, 2015; Lantos, 2001; Trapp, 2012, 2014). In fact, some energy companies have already begun implementing CSR within their corporate policies. Such is the case of Masdar that begun implementing CSR as early as 2009 (see: Mezher, Tabbara, and Al-Hosany (2010)) and Maersk Energy, part of Maersk Group which has a Sustainability Governance Framework that guides the CSR policies of all its companies (see: Latapí Agudelo (2017)).

However, for energy companies to be able to remain competitive while addressing the SDG-7 with its specific targets, it will be necessary for them to adapt new business strategies and objectives into their core operations. This can be done through a *Strategic* approach to CSR as defined by Chandler and Werther (2014) under the name Strategic Corporate Social Responsibility (SCSR) as:

> "The incorporation of a holistic CSR perspective within a firm's strategic planning and core operations so that the firm is managed in the interests of a broad set of stakeholders to achieve maximum economic and social value over the medium to long term." (Chandler & Werther, 2014, p. 65).

This definition of SCSR adjusts to the purpose of this study considering that achieving the maximum *social value* encompasses environmental protection. Moreover, Chandler and Werther's (2014) definition of SCSR is of relevance for this research because it provides a holistic approach to CSR that is fully incorporated into the company's planning and core operations. Furthermore, one of the only two available studies focused on SCSR and its impact on energy companies, concluded that SCSR can be linked to the improvement of the energy efficiency of energy companies and that it can be used with the aim of providing *affordable energy for all*, being this one of the main goals of Yingli Green Energy (Lian & Fu, 2014) and an important element of the SDG-7.

With this in mind, it would seem that SCSR could be appealing for energy companies to remain competitive while addressing the SDG-7 and its specific targets as well as for achieving a better environmental performance and energy efficiency. This is complemented with the fact that there is little literature focused on the impact of SCSR on the energy sector (see section 5). This opens room for further research on the potential benefits of SCSR for energy companies. As a result, this particular study becomes of relevance because it will analyze the impact of Strategic Corporate Social Responsibility

(SCSR) on energy companies focusing mainly on their energy efficiency and environmental performance. Also, because this study will provide a contextualization of SCSR within the energy sector and will explore the drivers, barriers and limitations for its implementation as well as its relevance for addressing the SDG-7.

4 Contribution to the literature

The present study represents novel contributions to the literature. To begin with, and to the best of my knowledge, this research is the first comprehensive investigation of the relationship between SCSR implementation and its positive impact on the energy efficiency and environmental performance of energy companies.

This is complemented to a greater extent by presenting a new conceptual framework for energy companies to improve their energy efficiency and environmental performance through SCSR. The novelty of this perspective relies on the fact that energy efficiency and environmental performance are commonly addressed only through technical and operational aspects, whereas this research proposes a holistic framework that adds the *strategic* perspective to corporate governance as well as bringing forward the environmental and social responsibility of energy companies. Additionally, this research highlights the relevance of SCSR as a strategic business framework by pointing out its potential for addressing the Sustainable Development Goal 7, to *ensure access to affordable, reliable, sustainable and modern energy for all*. Furthermore, this research addresses a gap found in the academic literature where the concept of SCSR is lacking in comparison to CSR. Accordingly, there is no literature focused on the impact of SCSR on the energy efficiency and/or environmental performance of energy companies (see section 5.1).

4.1Filling the gap in the literature

Even when the term *Corporate Social Responsibility* has been present in the literature since the early 1950's, it was until the end of the 1990's and the early 2000's that the concept begun being used as a strategic direction for companies. Since then, the strategic approach to CSR has been addressed by several authors (Carroll, 1999; Delmas, Hoffmann, & Kuss, 2011; Lantos, 2001) and with time it evolved into what Chandler and Werther (2014) defined as *Strategic Corporate Social Responsibility*. However, it is important to notice

that to this day there are limited academic articles that use the term SCSR as defined by Chandler and Werther (see table 1). This represents an area of opportunity for exploring the potential of SCSR for the energy sector.

To fully understand the innovative perspective of this research, it is necessary to determine the extent of the academic literature that focuses on SCSR for the energy sector. This was done through an advanced search on three databases: Science Direct, ProQuest and Leitir[4]. The search took into account the following considerations:

1. The selection of the three databases followed the fact these are the ones to which I have a higher level of access being a student from the University of Iceland. This way it is possible to access to a higher number of articles and journals by logging in with my university email or through the university VPN while on campus.
2. The search was confined to a timeframe of ten years, from January 1st, 2007 to October 26th, 2017. This was done with the aim of having the latest and most advanced studies at hand.
3. The search was done with the use of the Boolean connectors AND, OR, and AND NOT.
4. The search was done on the titles of articles.
5. The search within Science Direct included titles, abstracts and keywords. This specific search was not possible within ProQuest and Leitir.
6. The search within ProQuest includes only peer reviewed articles. This specific search was not possible within Science Direct and Leitir.

The objective of this research was to observe and compare the amount of available academic articles that focused on the subjects of CSR, SCSR, energy, energy companies, energy sector, renewable energy, sustainability, and several combinations of these subjects. This way it is possible to visualize the limited amount of specific literature for SCSR implementation in the energy sector.

First, I compared the amount of articles focused on CSR versus those focused on SCSR (table 1). The results show that the literature focused on SCSR is limited in comparison to the literature on CSR. This results may not be entirely accurate since some authors might

[4] Leitir is the database search engine of the National Library of Iceland. The link to the website is: https://leitir.is

be using the term CSR for what we understand as SCSR based on the definition by Chandler and Werther (2014). However, the difference in the results is of such magnitude that it is still possible to conclude that there is a lack of literature for SCSR.

Table 1. Literature that focus on CSR and SCSR

Search Term	Science Direct	ProQuest	Leitir
CSR	3,059	8,011	5,608
SCSR	57	66	23

Note. The search was conducted with the following considerations:

1) The search for CSR was done as follows: CSR OR "corporate social responsibility" with the aim of obtaining as many results that fit the term. It is important to notice that this search also brings results that do not correspond to Corporate Social Responsibility and correspond to other acronyms such as Concentrated Solar Radiation (CSR). However, these results represent less than 5% and can be disregarded.
2) The search for SCSR was done as follows: SCSR OR "strategic corporate social responsibility" with the aim of obtaining as many results that fit the term.

As can be seen, there is a clear gap in the literature between the concepts of CSR and SCSR. Accordingly, the available literature focused on CSR and SCSR for the energy sector is even less and the gap is of higher relevance (see table 2). The search included the terms "renewable energy" and "sustainability AND energy" in order to have a broader perspective of the available information that can be related to this particular research.

Table 2. Availability of literature

Search Term	Science Direct	ProQuest	Leitir
Energy	808,879	229,864	330,722
Energy company(ies)	385	146	648
Energy sector	1,920	806	853
Renewable energy	19,866	7,698	16,322
Sustainability AND energy	7,091	959	2,169
(CSR OR "corporate social responsibility") AND energy	205	22	43
(SCSR OR "strategic corporate social responsibility") AND energy	1	1	0

Note. The search was conducted with the following considerations:

1) The concept "energy" includes literature of theoretical aspects such as mechanical energy and other unrelated subjects that are of no interest to this study.

As can be seen in table 2, so far there have only been two studies that focused on SCSR on the energy sector:

1. Lian and Fu (2014) analyzed the SCSR policies of the Chinese company Yingli Green Energy and determined four stages of SCSR implementation. The article is of great relevance for this research because it is the first academic study to use the term *Strategic Corporate Social Responsibility* for describing the corporate policies of an energy company.
2. Lundgren and Zhou (2017) analyzed the links between environmental management and three dimensions of firm performance: productivity, energy efficiency and environmental performance. While the analysis focused only on 14 sectors of the Swedish industry for the period of 2002 to 2008, their results are of particular interest for this research. Their findings suggest a positive relation between energy efficiency and productivity emphasizing the potential cost savings of the first. Yet, the central finding suggests that improving the environmental performance of a firm translates into an additional burden on costs and productivity growth in the short term. In fact, Lundgren and Zhou (2017) conclude that improving the environmental performance directly causes productivity loss. This conclusion contrasts the belief that pro-environmental management through SCSR results in the maximization of economic and social value as defined by Chandler and Werther (2014). It also contrasts with the common belief that CSR and SCSR can boost productivity, competitiveness and innovation as explained by several authors (see: Latapí Agudelo, 2017; Lozano, 2015; Tutore, 2013). Given these divergent results, Lundgren and Zhou (2017) acknowledge that their findings should be considered with caution due to their limited timeframe and their specific focus only on the Swedish industry.

After a thorough literature search on three databases it is possible to conclude that there is a gap in the literature with regards to SCSR. Furthermore, the few articles focused on SCSR lack a holistic approach for the energy sector. This could have two possible causes:

1. Energy companies have not implemented SCSR as a guiding framework for their companies or they might be using CSR policies that do not encompass a holistic approach to their business direction. In a similar way, companies might be using CSR policies to some extent but do not realize that they fall under this term. This might be the case for energy companies that have clear and strategic sustainability frameworks but do not refer to them as CSR policies;

2. SCSR has not been studied as much as CSR and hence it hasn´t been implemented in the energy sector. As a result, the term Strategic Corporate Social Responsibility has not been used in the academic literature being linked to the energy sector. This creates an unexplored area of opportunity.

5 Research design and methods

As Creswell (2003) explains, any research design must follow preliminary steps that include the assessment of the knowledge claims and theoretical perspective, the consideration of the strategy and procedures of inquiry, as well as the identification of specific research methods. This constitutes the basis for a reliable research that will allow the researcher to approach the issue at hand with a detailed plan that takes into consideration the line of thought followed for the study, from general assumptions to specific research methods for data collection, analysis and interpretation (Creswell, 2014).

With this in mind, this section will explain why this research follows the *Environmental Philosophy* school of thought as understood by Robert (2000). Then, it will be explained why the chosen research theory is *Environmental Pragmatism* as understood by Tapio (1996) and as defined by Robert (2000), as well as why it is relevant to take into consideration the benefits of *Pragmatism* as explained by Creswell (2003). Also, this section will explain why this research will follow a mixed method research and the reasons for choosing it over other methods. Then, this section will scrutinize the weaknesses and strengths of each choice to conclude that it is the best fit to conduct the research at hand. Finally, this section will provide an insight on the elements of the research and their relevance for this study. This will be complemented with the justification for the company selection as well as an explanation of the data collection and analysis and the limitations of the research.

5.1Methodology

The nature of this research makes it fall under the *Environmental Philosophy* school of thought as understood by Robert (2000). The reason behind it is because this study reflects questions of environmental ethics such as ”how does intellectualism manifest in environmental ethics?” (Robert, 2000, p. 194). Accordingly, this study follows the theory of *Environmental Pragmatism*[5] as understood by Robert (2000) and complemented by

[5] What Robert (2000) defines as “wild ontology” falls into other definitions of “environmental pragmatism”. Therefore, Robert's "wild ontology" will be referred to as "environmental pragmatism" with the purpose of maintaining integrity among diverse literature that focus on the same subject.

considerations from *Pragmatism* as understood by Tapio (1996) and Creswell (2003, 2014).

Environmental Pragmatism is of relevance for this research because its purpose is to make *Environmental Philosophy* part of the environmental policy and decision making (Robert, 2000). This line of thought fits the study's aim of exploring the rationale behind SCSR implementation, which can be understood as a decision making framework that encompasses environmental concerns. Furthermore, *Environmental Pragmatism* offers a holistic approach to the dynamic and complex interplay of human – nature relations[6] (Robert, 2000) which provides this study with a wider perspective than other theories.

Additionally, it is important to point out that *Pragmatism* permits to carry out the investigation without limitations with regards to the research method (Tapio, 1996). This means that the chosen method is the one best agreed on and it takes into consideration internal and external factors for decision making (Tapio, 1996). Correspondingly, Tapio (1996) defined the benefits of *Pragmatism* in the following way:

a) The chosen method(s) are those best agreed on. This is of relevance because it does not limit the research to one specific method.
b) There is interaction between the parts of the method providing a more versatile approach to the issue at hand.
c) The explanatory factors come from internal and external influences in the decision making.
d) It gives room for several policy alternatives.

(Tapio, 1996)

Later, Creswell (2003) explored additional benefits of *Pragmatism* and defined the following:

- Pragmatism is not committed to one system of philosophy. This means that researchers can draw liberally from qualitative and quantitative assumptions for their inquiries.
- Researchers have a freedom of choice which allows them to choose the methods, techniques, and procedures in the best way to satisfy their needs and objectives.

[6] Robert (2000) defines this approach as *wild ontology* or an *ecobiosocial approach*.

- For Pragmatism, the world is not an absolute unity. This provides the theoretical elements for mixed methods' researchers to have many approaches for collecting and analyzing data instead of being limited to only one method.
- Pragmatism is problem centered and looks at the consequences of actions. This is complemented by being oriented at a real-world practices.

(Creswell, 2003)

As can be seen, conducting this research following the *Environmental Philosophy* and the *Environmental Pragmatism* paradigm provides specific benefits for this research. Nevertheless, it is relevant to explain why this epistemological approach is chosen over other schools of thought and theories such as the *Positivism, Postpositivism* and *Realism*. While *Positivism, Postpositivism* and *Realism* provide useful theoretical frameworks for some types of research, they fall short for analyzing corporate policies such as SCSR. For instance, *Positivism* follows the 'best fit' mathematical model for the research while *Realism* follows a 'what if' method while *Pragmatism* allows the chosen method to be the one best agreed (Tapio, 1996). In the case of *Postpositivism*, the development of numerical measures is essential since it follows a deterministic philosophy as well as a reductionist strategy (Creswell, 2003). Then, *Pragmatism* provides more versatility with regards to the methods as well as for the data collection and analysis when it comes to the evaluation of corporate policies and their impact.

Other key points that fit this particular research are that *Pragmatism* has a real-world practice orientation (Creswell, 2003) and is regarded as a decision making process that encompasses broad social interests (Tapio, 1996). This is not the case for other theories. For example, *Positivism* looks to extrapolate past developments to predict future results, considering only facts and neglecting values for decision making (Tapio, 1996); *Postpositivism* is focused on theory verification with a high reliance on numerical measurements for determining outcomes (Creswell, 2003); and, in *Realism* facts and values are kept separate for the formulation of possible alternatives for policy making (Tapio, 1996). Given these points, it is clear that *Environmental Pragmatism* is the best choice for the research at hand.

5.2Research method

The epistemological approach and the theoretical framework chosen, point out to the use of a mixed method research as the best fit for this particular research. The reason behind it is because this study will include both, qualitative and quantitative strategies, for the collection, analysis, and interpretation of data. For the most part, this research will be conducted with a qualitative approach for understanding the motivations behind SCSR implementation and its potential benefits for improving the environmental performance and energy efficiency of energy companies. This includes conducting interviews with high level executives of energy companies to understand the drivers, barriers, and limitations for the implementation of SCSR and its relevance for addressing the SDG-7 as well as for reducing the dependency of fossil fuels.

This will be complemented with a quantitative analysis of selected Key Performance Indicators that can be linked to the environmental performance and energy efficiency of energy companies. Through a quantitative approach it will be possible to observe the variations of such indicators through time while the qualitative approach will allow to link such changes to corporate policies. (The elements of the research will be explained in further detail in section 6.3.)

Then, it is important to understand the benefits and limitations of a mixed method research. To begin with, a mixed method design allows the researcher to reach the most comprehensive and holistic understanding of a research problem (Creswell, 2003; Tashakkori & Teddlie, 2003) with the aim of achieving pragmatic knowledge claims (Creswell, 2003). The reason behind it is that a mixed method approach allows for both, open and closed-ended questions which lets the researcher explore a wider scope than using a single method (Creswell, 2003). This is supported by collecting data in multiple forms which permits to expand the scope of the subject through statistical and text analysis (Creswell, 2003) as well as through qualitative strategies, such as interviews. Accordingly, Creswell (2003) pointed out the key reasons for using a mixed method in the following way:

Table 3. Knowledge claims, strategies of inquiry and methods for a Mixed Method Research

Knowledge Claims	Strategy of Inquiry	Methods
Pragmatic Assumptions	Mixed Method Design	Close-ended measures and open-ended observations

Note. Adapted from *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* by Creswell (2003), figure 1.2.

In a similar way, Tashakkori and Teddlie (2003) explored the mixed method design and found out that one of its most relevant strengths is that it uses supplemental research strategies for the collection of data that would not be possible to obtain otherwise, and as a result this increases the scope of the research. For the qualitative research, the use of supplemental strategies help identify ideas and/or concepts that are relevant and can be incorporated to the study while it provides supplementary explanations with regards to the data that can be used for subsequent interviews or in the collection of additional information (Tashakkori & Teddlie, 2003). In the case of the quantitative research, these supplemental strategies help in the interpretation of data by providing explanations for unexpected results as well as for providing support for the findings (Tashakkori & Teddlie, 2003).

However, when using a mixed method it is indispensable to maintain the methodological congruence. In other words, the assumptions have to remain congruent and consistent with the components of the method (such as the data collection and data analysis) (Tashakkori & Teddlie, 2003). This is of great relevance because a mixed method approach may be perceived as being less rigorous and the supplemental data could be considered insufficient (Tashakkori & Teddlie, 2003). Nevertheless, this perception can be countered through a structured research design that follows specific steps and strategies for the data collection and analysis.

Therefore, it is necessary to define the type of mixed method design. According to the *Handbook of Mixed Methods in Social & Behavioral Research* (2003) there are four factors that help determine the type of mixed method design: 1) the implementation of data collection; 2) the priority given to quantitative or qualitative research; 3) the stage in the research when the integration of the quantitative or qualitative research happens, and; 4) the potential use of a transformational value or action-oriented approach for the study (Tashakkori & Teddlie, 2003).

Given these factors, and taking into consideration the aim and research questions of this study, it is clear that the data collection will have to follow specific phases of implementation. This will provide a progressive gathering of information that helps maintain a methodological order that will translate into an organized research. With this in mind, the mixed method design of this study will follow the *implementation of data collection* factor or criteria, which refers to the order the researcher will use to gather the quantitative and the qualitative data (Tashakkori & Teddlie, 2003).

Taking into consideration this factor of *implementation* means that either the qualitative or the quantitative research is conducted first, following the order that fits best the objectives of the researcher (Tashakkori & Teddlie, 2003). In this case, the qualitative research will be conducted at an earlier stage than the quantitative phase. This way it will be possible to first explore the issue at hand and then be able to complement the study with the quantitative research needed to complete its understanding (Creswell, 2003; Tashakkori & Teddlie, 2003). As a result, this research falls into what Creswell (2003) and Tashakkori and Teddlie (2003) call *sequential* procedures.

The *sequential* procedures can be *explanatory*, *exploratory*, or *transformative*. In the *sequential explanatory* design, priority is given to the quantitative data, which means that the quantitative data collection and analysis come first (Tashakkori & Teddlie, 2003). The opposite occurs with the *sequential exploratory* design, where the qualitative data has priority, which translates to collecting and analyzing the qualitative data first (Tashakkori & Teddlie, 2003). In the case of *sequential transformative* design, the data transforms from qualitative to quantitative, or vice versa (Tashakkori & Teddlie, 2003).

For this research, and as mentioned before, the qualitative data collection and analysis will be conducted before the quantitative research. Then, it is clear that this study will follow a *sequential exploratory* design as explained in chapter 8 of the *Handbook of Mixed Methods in Social & Behavioral Research* (2003) (see figure 1).

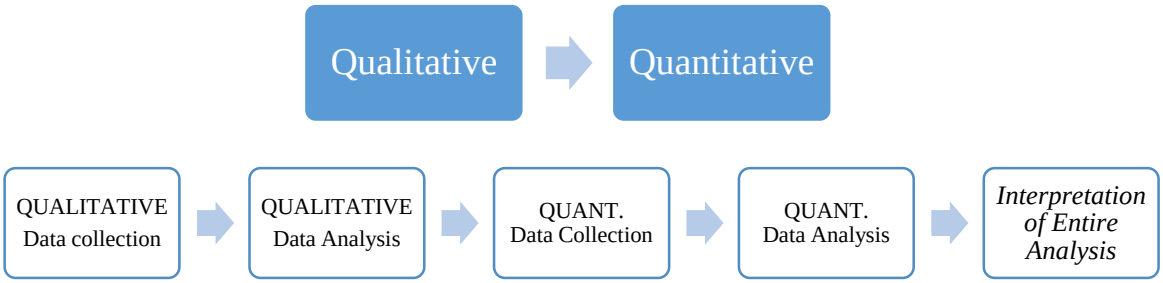

Figure 1. Sequential exploratory design

Note. Adapted from the *Handbook of Mixed Methods in Social & Behavioral Research* (2003), figure 8.4b. QUANT. stands for quantitative research.

With the analysis of the available schools of thought, theories, and research methods it was possible to understand their benefits and limitations and this way be able to determine the best options for conducting this research. As a result following the *Environmental Philosophy* school of thought as understood by Robert (2000) is the most appropriate choice for this study because it allows the research to approach questions of environmental ethics that need to be taken into account for the design and implementation of corporate policies and strategies, such as SCSR. This is supported by the ideal of *Environmental Pragmatism* to transform environmental philosophy to environmental policy (Robert, 2000) and in turn have an impact on corporate strategies. Furthermore, following *Pragmatism* allows the research to be conducted without limitation with regards to the research method (Tapio, 1996) which gives room for using supplemental strategies to have a more comprehensive and holistic research. Finally, a mixed method design will provide a wider set of options for conducting the study while it will provide a rigorous methodological approach. Furthermore, by choosing a *sequential exploratory* design it will be possible to explore the qualitative data first and then complement it with quantitative research to complete the understanding of the topic. This is of great relevance because this study focuses on exploring the impact of SCSR on the energy efficiency and environmental performance of energy companies. To do so, it is first necessary to conduct qualitative research with regards to SCSR implementation and then complement such information with specific quantitative data and indicators that can be linked to the environmental performance and energy efficiency of such companies.

5.3Elements of the research and availability of information

The adequate use of a mixed method research relies on keeping a methodological order and organized research strategies. This is of particular relevance in order to have a clear understanding of the interrelation of the elements of the research. With this in mind, it is important to define the key elements of the study and their relevance.

5.3.1 Qualitative elements

For Creswell (2003), qualitative research is a process that is mostly inductive and where the researcher focuses on generating meaning from the data collected. A common use for qualitative research is to develop a "theory of a process, action, or interaction grounded in the views of participants in a study" (Creswell, 2003, p. 14). In this case, through the use of qualitative elements it will be possible to develop a theory of the impact of SCSR based on the views of high level executives of energy companies which will be complemented with primary and secondary sources of information. Therefore, to make the most out of it, the qualitative section of this research is divided into two phases: data collection and data analysis (see figure 2):

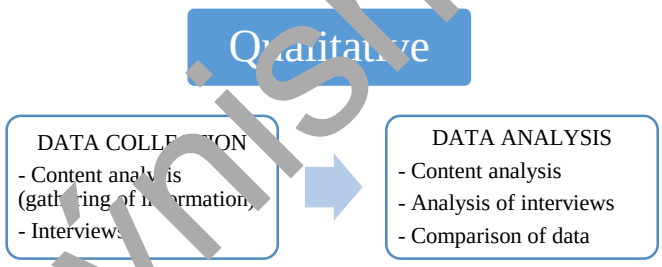

Figure 2. Qualitative research design

Note. Developed by the author.

Content Analysis

Through content analysis it is possible to identify common characteristics and analyze the shared elements that can be found in diverse types of texts (Frey, Botan, & Kreps, 1999). In this case, a comprehensive and thorough content analysis will help identify shared strategies and corporate policies of different energy companies.

The first step for conducting content analysis is the selection of key sources of information. In this case, the primary sources of information will come from the energy companies themselves. This will be in the form of internal and public reports such as their annual sustainability reports or even in the form of the Global Reporting Initiative (GRI)

reports. This will be complemented with the vision and mission statements as well as the sustainability strategies and/or CSR policies of each company. It is important to point out that these primary sources of information are usually available in the websites of the firms. In any case, direct contact will be made with the companies to ask for additional information that would be otherwise unavailable (see section 6.4).

The use of secondary sources of information will be essential for complementing the data gathered from primary sources. For this research, the secondary sources include academic journals, published and unpublished theses, and public information that is relevant for the qualitative analysis. As a result, the use of primary and secondary sources of information will provide sufficient data to establish the context for this research. In other words, the content analysis will allow the understanding of the current context and will provide an overview of the sustainability practices, CSR and SCSR implementation in the energy sector, particularly for the energy companies selected for this research.

Interviews

The second phase of the qualitative research focuses on obtaining specific information from primary sources. This will be done by conducting interviews to high level executives of the selected energy companies. The use of interviews is of relevance for this research because open-ended exploratory interviews are helpful for collecting the views and assessments of the participants with regards to a certain subject (Creswell, 2003). Furthermore, as Creswell (2003) explains, this type of interviews allows the participant to provide additional information that might otherwise not be considered by the researcher.

The format of the interviews will consist on a series of written questions that will be provided to the participant before the actual interview. This will serve as a guideline for the interview and it will translate into a more casual discussion. Considering that the majority of the selected companies are based on other countries, it is clear that most of the interviews will be conducted either by phone or by skype. Before each interview, the participants will be asked if they give their consent for having the audio of the interview recorded. The audio recording would later be transcribed and will be used for further analysis.

The collection of information through content analysis and interviews will provide the necessary data to conduct the qualitative analysis. Additionally, the use of these qualitative elements will allow the gathering of data from primary and secondary sources of

information which will translate into having a broader scope and be able to proceed to the data analysis and interpretation. As a result, the qualitative research section of this study will permit the creation of meaning from the data obtained from the content analysis and the interviews.

5.3.2 Quantitative elements

Even when this research will be mostly qualitative, it will be complemented with information that can only be provided by quantitative methods. The reason behind it is because a quantitative method helps identify factors than can influence an outcome (Creswell, 2003) and that can be measured. For this study, the main factor of evaluation is represented by the implementation of SCSR policies and the outcome is the impact it would have on the environmental performance and energy efficiency of the company. Then, the impact will have to be measured in order to complement the qualitative elements of this research.

Following a quantitative approach permits the testing of objective theories by analyzing the relationship of key variables that can be measured (Creswell, 2014). In this case, the variables that will be analyzed will be in the form of Key Performance Indicators (KPIs) of energy companies. The reason for selecting specific KPIs is to find a trend in energy companies that have implemented SCSR policies. In other words, this research will explore if the implementation of SCSR has an impact on energy efficiency and environmental performance KPIs. To do so, this study will rely on quantitative elements that will be used in two phases: data collection and data analysis (see figure 3).

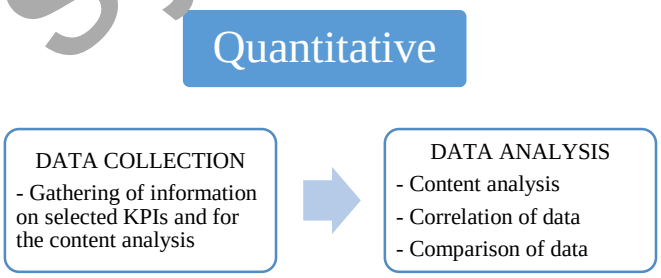

Figure 3. Quantitative research design

Note. Developed by the author.

Content analysis

Content analysis is used to identify and measure common occurrences and analyze the shared elements that can be found in diverse types of texts (Frey et al., 1999). Its relevance for this research relies on the fact that a *quantitative* content analysis is a step-by-step procedure that helps the researcher answer specific questions and test hypotheses (Frey et al., 1999). In this case, an exhaustive and comprehensive *quantitative* content analysis will help identify shared patterns that can be observed and measured in several energy companies. This means that the content analysis will provide information with regards to the energy companies' environmental performance and energy efficiency, mainly in the form of KPIs, which will allow to observe commonalities between the firms' performance.

To do so, the first step is to select appropriate sources of information. In this case, the primary sources of information are the energy companies themselves. From them, it will be possible to obtain data from internal reports as well as from public information that can be found in the company's sustainability reports, their GRI reports, as well as any additional material that can be found on their webpages. This will be complemented with information obtained from secondary sources such as public presentations at congresses and conferences, data published by working groups of the energy sector, and information published by governmental bodies and the academic and social sectors. Other secondary sources of information include scientific journals, published studies, and public information that would be relevant for the quantitative analysis. It is important to point out that the availability of information depends on how much data is of public domain. In any case, direct contact will be made with the companies to ask for additional information that would be otherwise inaccessible (see section 6.4).

As a result, the use of primary and secondary sources of information will provide enough data for conducting a quantitative content analysis through which it will be possible to explore trends in the corporate policies that can be linked to the environmental performance and energy efficiency of different energy companies.

Correlation of Data

The content analysis will be complemented with a correlation of data to explore the impact of SCSR policies on specific KPIs of the selected energy companies. It is important to realize that a correlation of data is a statistical tool that helps determine the tendency or pattern of two or more variables and is used to observe if they influence each other through a direct relationship (Creswell, 2012).

In this case, the selected approach is what Creswell (2012) calls *explanatory correlational research* that focuses on the extent in which changes in one variable are reflected on the other, or in other words, how they co-vary together. This will allow to find the degree of association between the implementation of SCSR policies and the selected energy efficiency and environmental performance KPIs, which in turn could be represented as a linear correlation of variables.

Through the correlation of data it will be possible to observe if there are common variations on the energy efficiency and environmental performance of energy companies once they have implemented SCSR policies. This will be possible by selecting specific KPIs that are linked to the environmental performance and energy efficiency of the companies and observe how they vary once a company implements SCSR.

The selection of KPIs will be done after the content analysis in order to be able to select common indicators within the selected companies. It is relevant to point out that the correlation between SCSR policies and KPIs will be further explored in detail after the qualitative research is done in order to have enough information about the companies and be able to select correctly the variables that will be analyzed.

The gathering of information from primary and secondary sources through quantitative elements will provide the necessary data to conduct the analysis. This will be done through a content analysis as well as through the correlation of data which combined will provide the material needed to be able to observe patterns and interpret the relationship of the selected variables. As a result, the quantitative research will provide the degree of association between the implementation of SCSR and its impact on specific KPIs. Finally, the combination of qualitative and quantitative methods will allow to explore the impact of SCSR through a holistic approach that includes diverse types of data.

Notes:

1. To be able to strengthen my skills in qualitative research I will take the course Qualitative Research Methods (STJ203F) which will be taught in English in the spring semester of 2018.
2. The interviews might be complemented with a survey in order to determine the perception that high level executives have on the impact of SCSR on the environmental performance and energy efficiency of the energy companies.

5.4Company Selection

Taking into consideration the objective and nature of this research it is clear that an evaluation of the whole energy sector would be not only impractical, but also inaccurate. Then, in order to be able to reach adequate results it is necessary to narrow down the scope of the study to specific companies. With this in mind, the selection was based on the following characteristics:

- The firm has CSR, SCSR, or strategic sustainability policies in place. Some of these companies have strategic sustainability frameworks that fall into the SCSR definition that will be used for this research.
- There is available information online about their strategic corporate policies and sustainability practices.
- It is known as a leader in sustainability practices, CSR and/or in its field.
- It is possible to obtain an interview with a high level executive.

Given these points, the selected companies are: Masdar, Landsvirkjun, Maersk, General Electric and Rosatom. It is important to point out that the main emphasis will be on Masdar, Landsvirkjun and Maersk because of their international recognition as leaders in sustainability practices, CSR, and innovation. General Electric and Rosatom were included to provide additional examples of the implementation of CSR and sustainability policies in the large scale.

The selected energy companies participate in the market with different activities. This will allow to explore if SCSR has a similar impact in the performance of the company even if it focuses on a different area of the energy sector. Masdar, being part of Abu Dhabi´s government is an interesting example of the transition from fossil fuels to renewable energy which was done through the implementation of CSR. Landsvirkjun is internationally recognized as an entrepreneur in renewable energy and has CSR and sustainability policies in place. Maersk, is a conglomerate that is guided by a SCSR framework under the name of "Sustainability Governance Framework" and is now in the transition towards the digitalization of the company. General electric is guided by "GE Sustainability" which is in charge of the business strategy through a SCSR approach. And Rosatom has a governance framework that highlights sustainability and clean energy as strategic priorities. Additional details for the selection of each company can be seen in the following figures (figures 4 to 8):

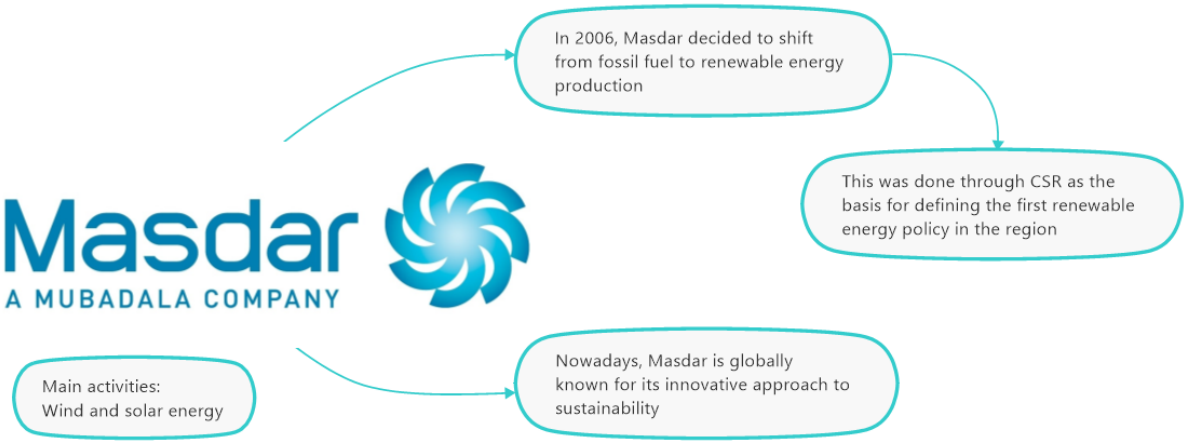

Figure 4. Selection of Masdar

Notes. 1) Developed by the author based on information retrieved from the Group´s main website at www.masdar.ae;

2) Bjargey Anna Guðbrandsdóttir, project manager at the Environment and Natural Resources Graduate program, has offered to help me get in contact with Masdar executives. I will ask her to help me establish the contact once the study has reached the stage of qualitative research.

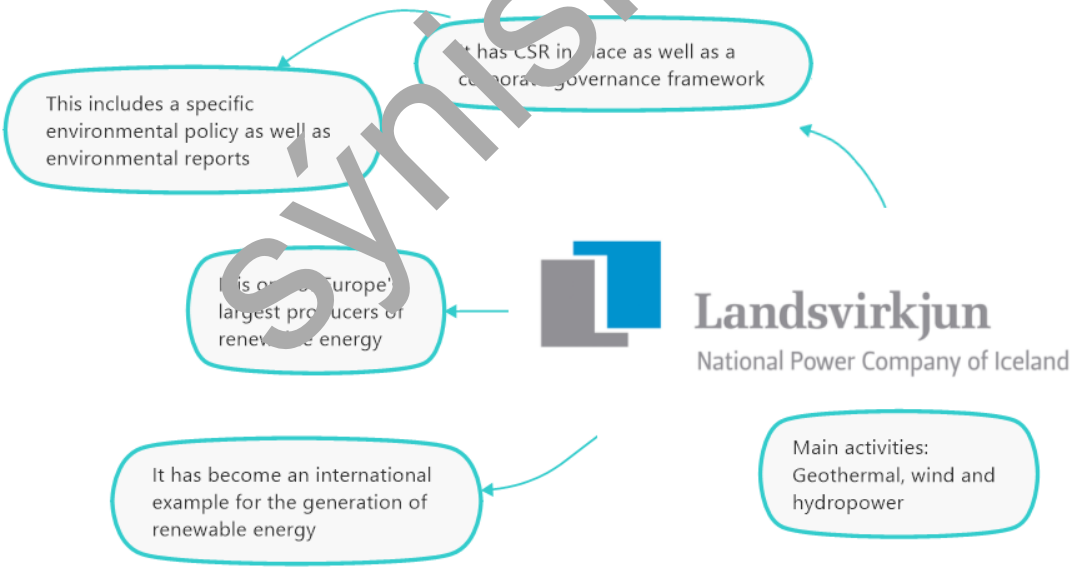

Figure 5. Selection of Landsvirkjun

Notes. 1) Developed by the author based on information retrieved from the company´s main website at www.landsvirkjun.com;

2) I haven´t stablished any contact yet. However, I will ask any of my supervisors to see if they can help me get in contact with the company's CSR area.

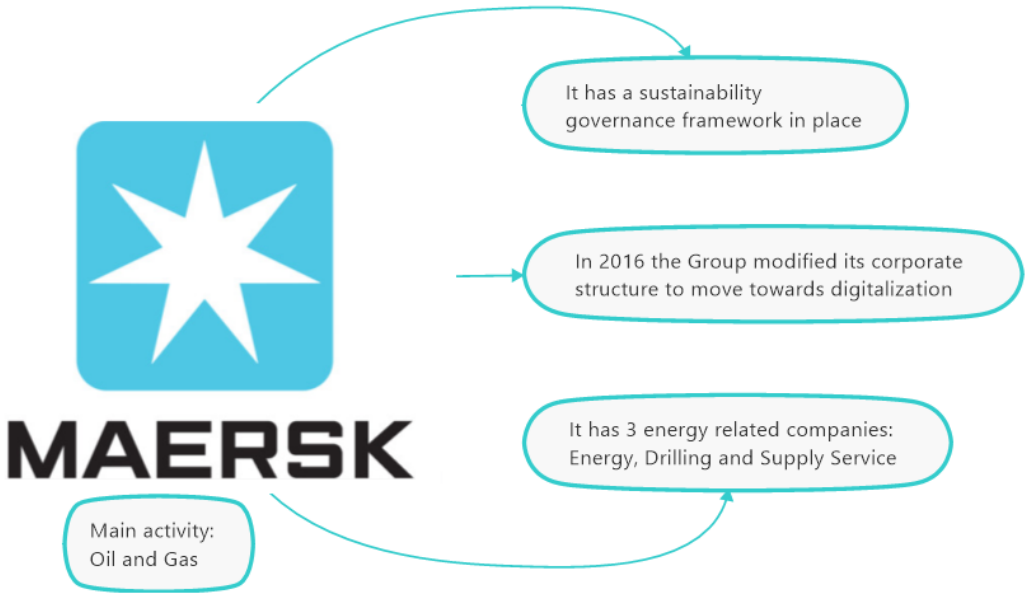

Figure 6. Selection of Maersk Energy

Notes. 1) Developed by the author based on information retrieved from the Group´s main website at www.maersk.com;

2) I have already collaborated with the Director of Sustainability of Maersk Line and the Director of CSR of Maersk Group and I believe they would allow me to interview them for this research.

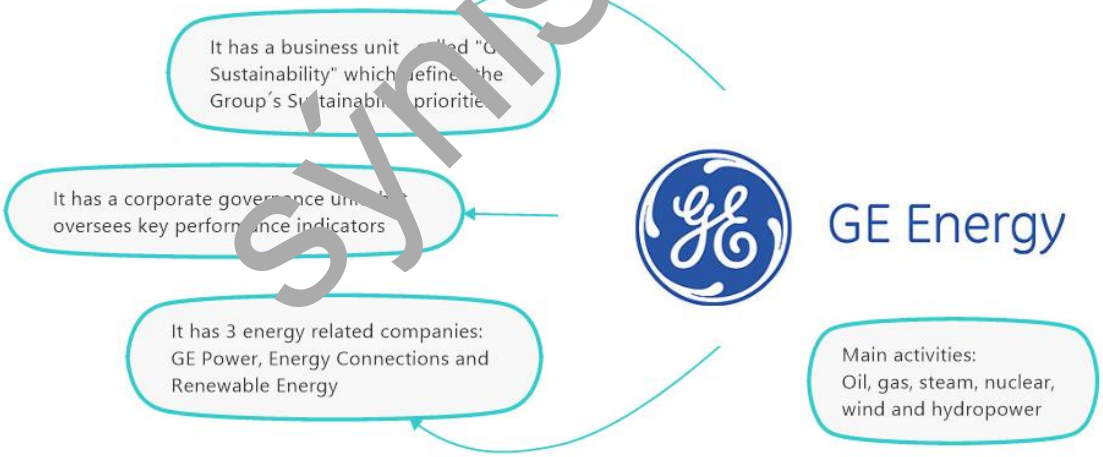

Figure 7. Selection of GE

Notes. 1) Developed by the author based on information retrieved from the GE Power website at www.gepower.com;

2) I have the emails of Ann Condon, director of the internal sustainability programs and Paul Holdredge from resources and environmental strategies. I will establish contact with them once I have reached the qualitative research stage. Also, I have established direct contact with Karina Rodriguez from GE Grid and is willing to help me get in contact with the Sustainability area.

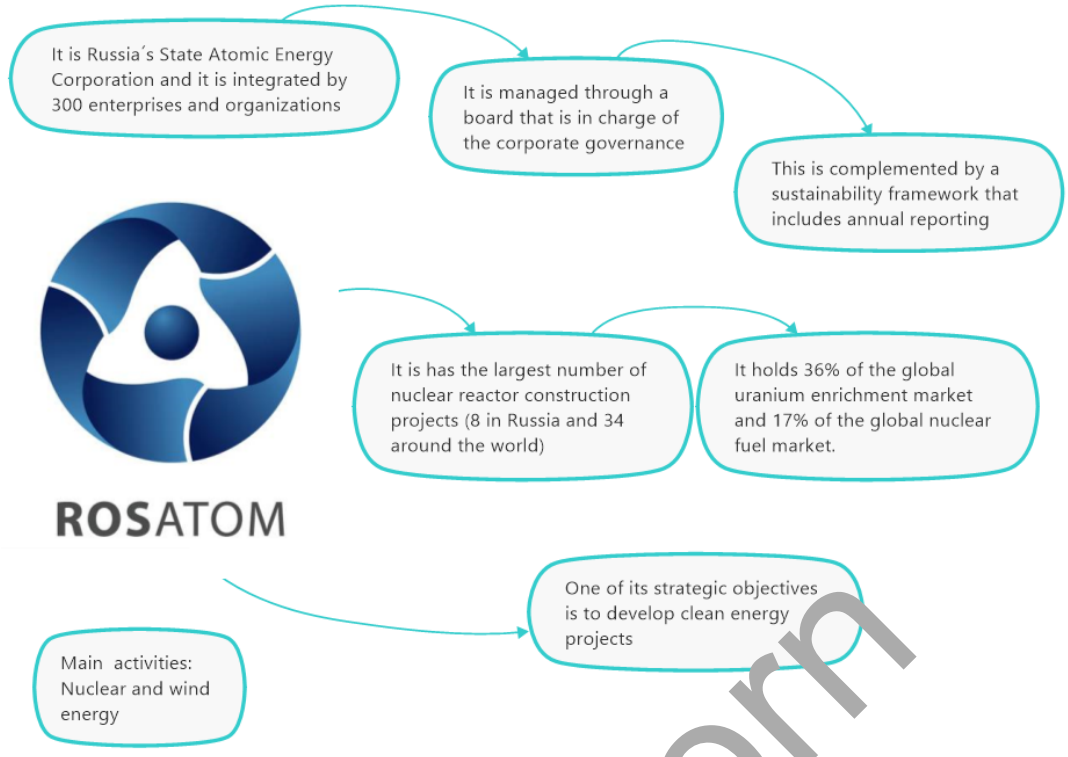

Figure 8. Selection of Rosatom

Notes. 1) Developed by the author based on information retrieved from the Group´s main website at http://www.rosatom.ru/en/about-us/key-figures

2) I established contact with Konstantin Fokin during one of Rosatom's conferences in the congress in Sochi, Russia in Oct. 2015. He is the director of construction of nuclear reactors and agreed on putting me in contact with the sustainability area. I have already sent him an email to request his help for contacting the sustainability area.

5.5Limitations

This study will be limited by specific factors. To begin with, the selected research methods imply that the primary sources of information, mainly from the interviews and the content analysis, will play a key role for reaching reliable results. However, this will be addressed by contacting people within the company with whom either me, or any of my supervisors have already collaborated with as well as through a thorough and exhaustive search and content analysis. Accordingly, the research will rely on the available information of each company which may come from primary or secondary sources. In this case, choosing companies that are internationally recognized as leaders in sustainability practices and/or in their fields is expected to result in having enough available information for each company. A key aspect to point out is the fact that the selected firms have governance

frameworks in place which fall into the definition of SCSR used for this study and all of them have public annual reporting of their key indicators.

6 Communicating the results

A relevant aspect of this study will be the proper communication of the results. This will be done through publications as well as presentations. The publications will be aimed at high ranking academic journals that publish the state of the art literature with regards to the subject at hand. This will be complemented with participation in conferences and seminars in which it will be possible to share the findings and establish cooperation with other researchers or people involved in the energy sector as well as with the SCSR field. It is important to notice that the timing for communicating the results will be defined at a later stage of the research.

7 Publication of Articles

One of the key ways for communicating the findings is through the publication of articles in high ranking journals. In this case, the proposed articles reflect the topics that will be addressed through a general-to-specific chronological order (see figure 9). Following this order reflects the way in which the research is structured by going from the context and general aspects of the topic to specific issues and examples. Furthermore, the rationale behind the publication of articles is to clearly show a thread between them and be able to encompass and share all the findings of this study. Figure 9 shows the chronological order proposed for the publication of articles as well as the thread between them and the research questions that each one answers:

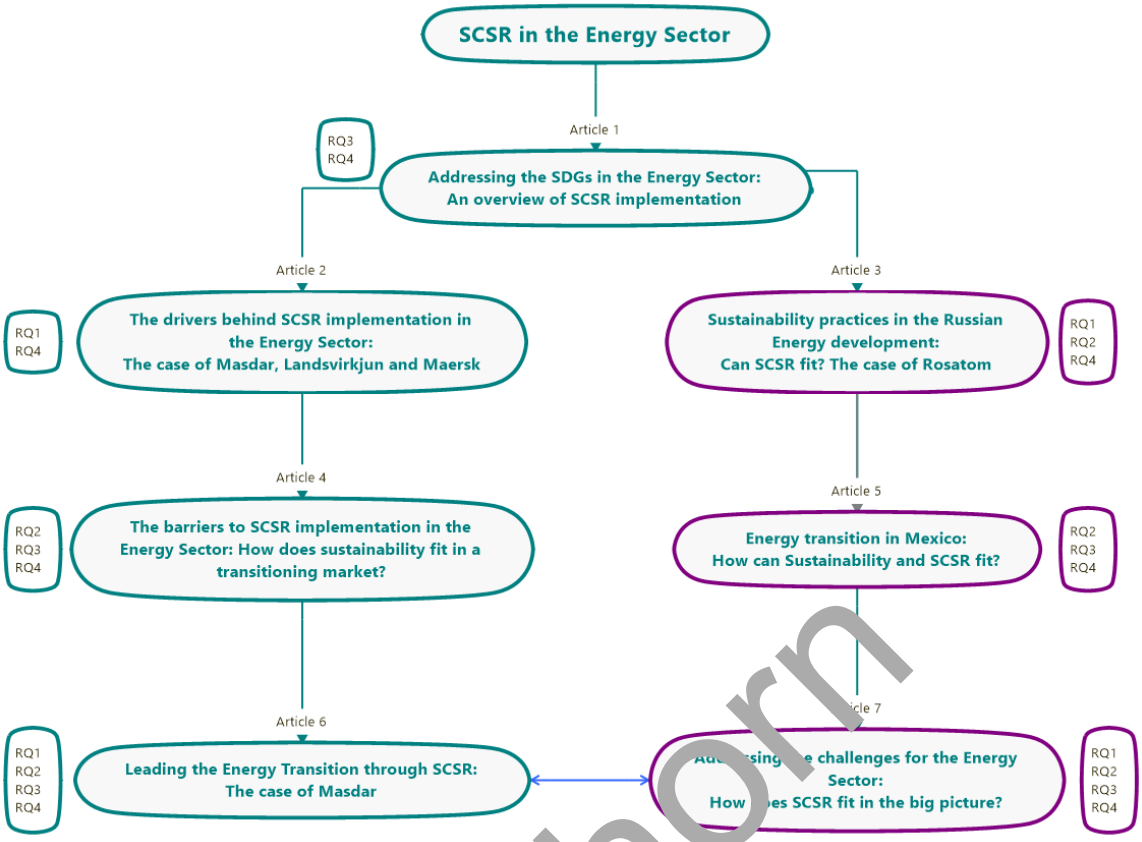

Figure 9. Proposed articles

Notes. 1) Developed by the author.

2) The thread in green color aims at exploring tangible results that will be obtained through the qualitative and quantitative elements of this research while the thread in purple addresses open ended questions that will be solved by the interpretation of the findings of the research.

3) This notes is to keep in mind the research questions of this study in order to make the most out of figure 9. The research questions of this study are:

   a. Main research question: To what extent does Strategic Corporate Social Responsibility implementation impact the environmental performance and energy efficiency of energy companies?

   b. RQ1: What are the drivers behind Strategic Corporate Social Responsibility implementation in the energy sector?

   c. RQ2: What are the barriers and limitations for energy companies for the implementation of Strategic Corporate Social Responsibility?

   d. RQ3: How can Strategic Corporate Social Responsibility help in achieving the objectives of the Sustainable Development Goal 7?

   e. RQ4: How can Strategic Corporate Social Responsibility help the energy sector reduce its dependence on fossil fuels?

8 Timeline

In order to achieve reliable results that are delivered on time it is necessary to have a clear structure of the research that follows a specific timeline. With this in mind, the proposed general timeline for conducting this research is the following:

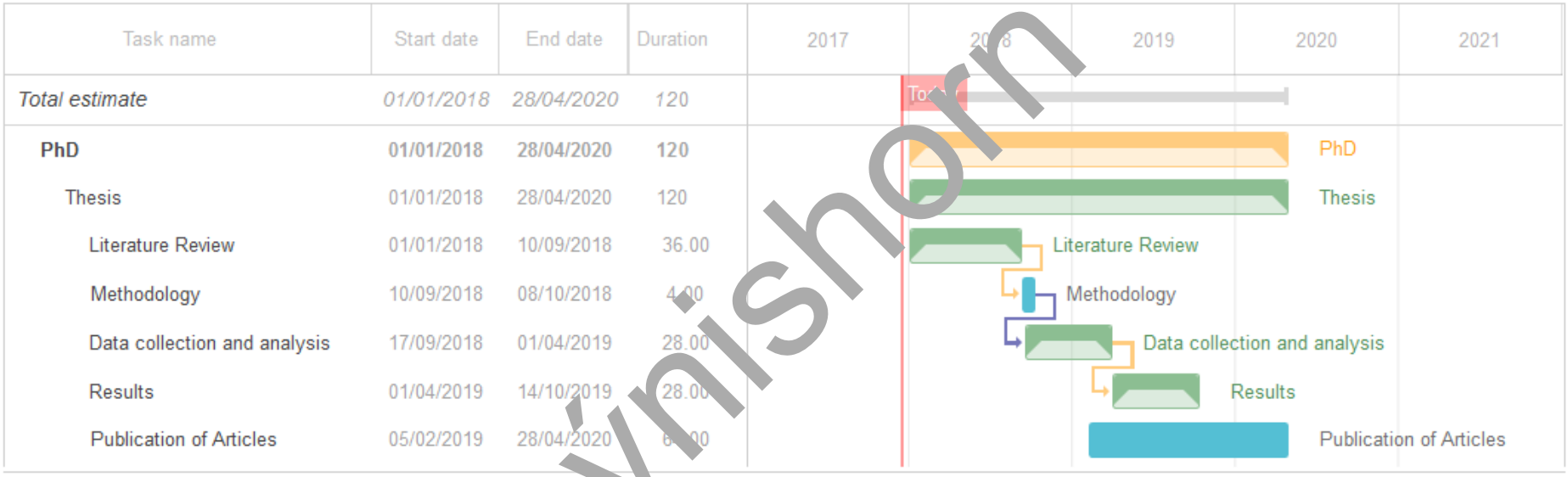

Figure 10. General timeline

Notes. 1) Developed by the author.

2) The duration is expressed in weeks.

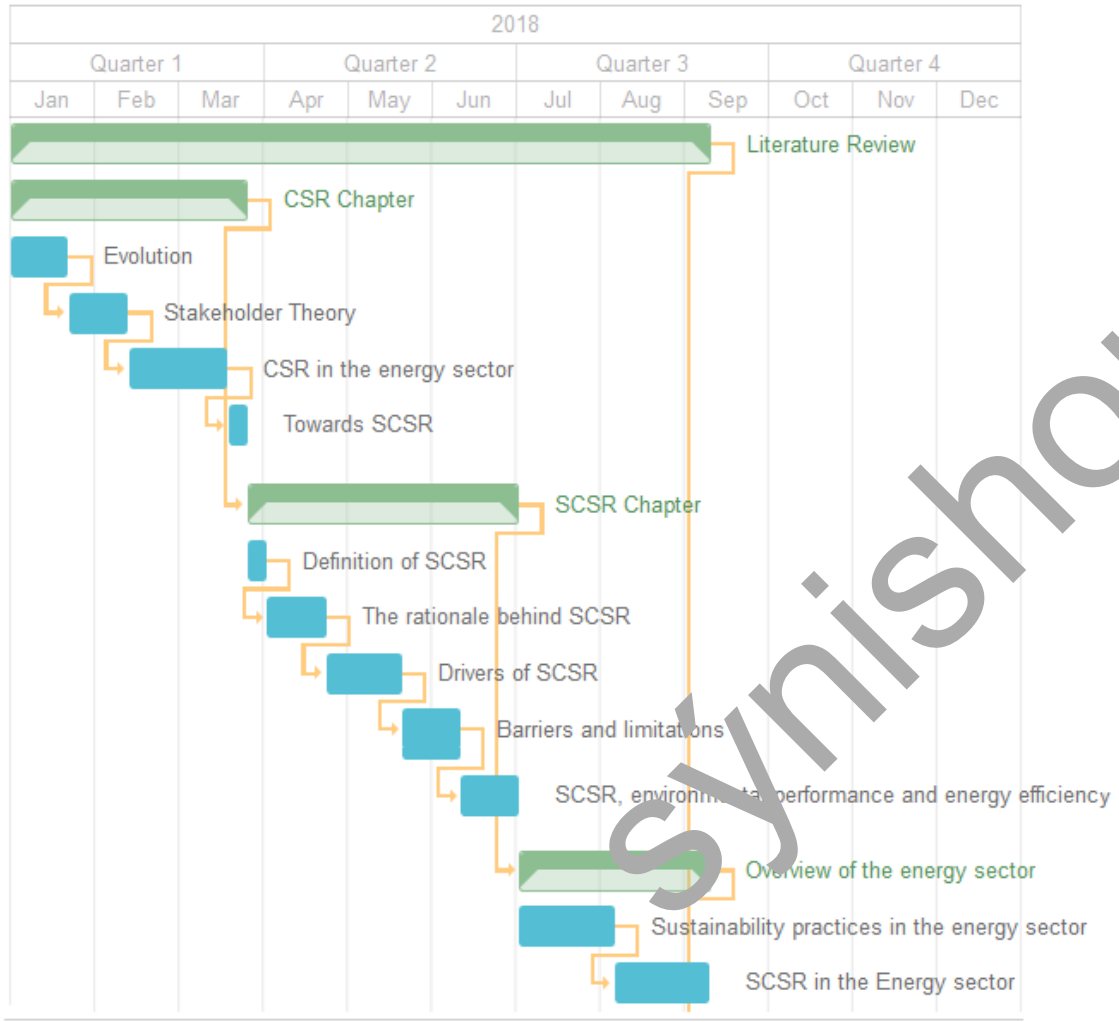

Figure 11. Timeline for the literature review

Note. 1) Developed by the author.

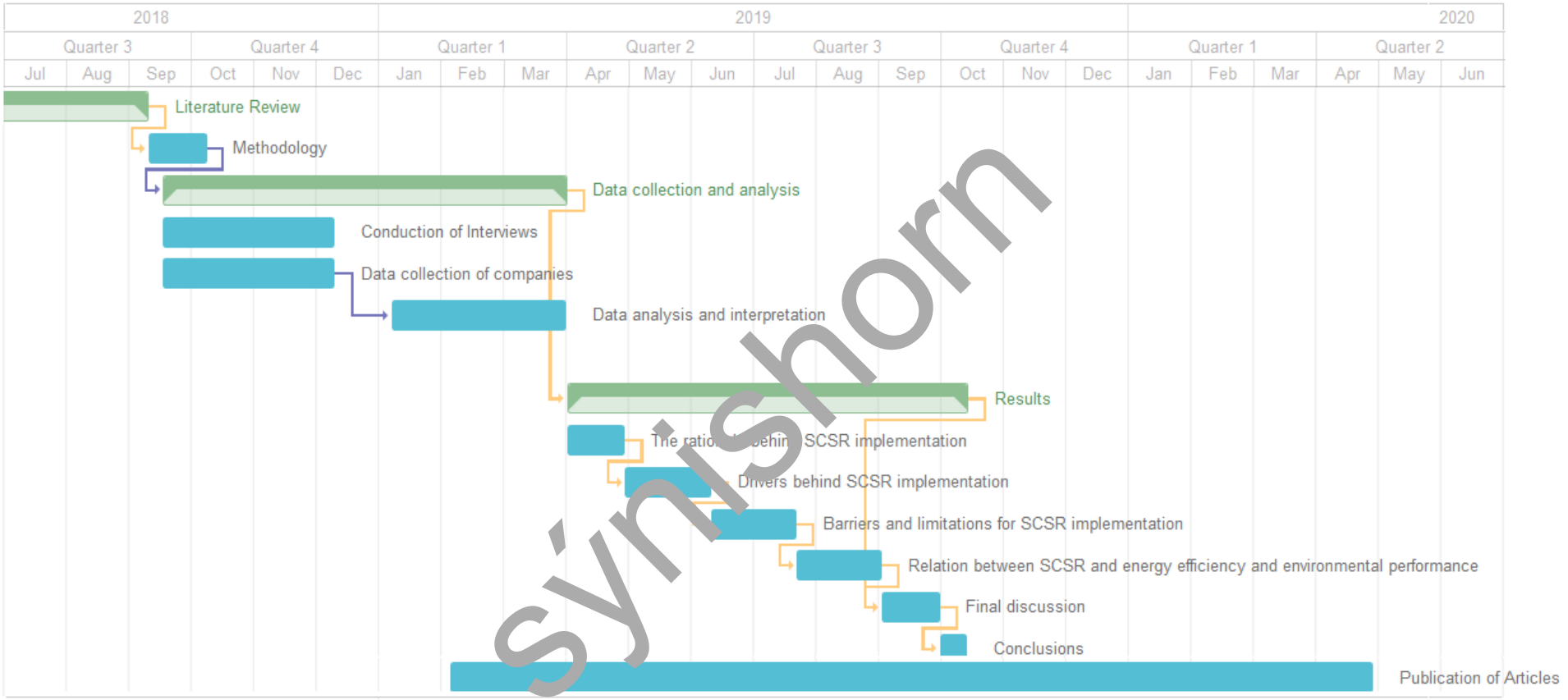

Figure 12. Timeline for the research

Note. 1) Developed by the author.

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