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The contingency effect of national culture on corruption

A comparative case study of Petrobras and Statoil

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ABSTRACT

Petrobras and Statoil have long been regarded as role models for other NOCs in terms of managerial practices, transparency, efficiency and value creation. Nevertheless, both companies have experienced corruption in the past decades. This study compares two cases - Operation Car Wash and Statoil-Horton scandal - in order to investigate the cause of a remarkable contrast between the levels of corruption observed in these companies. Literature review of both theoretical and empirical research is performed, with focus on the role of national culture as a contingency factor and its relationship to corruption. The findings point that national culture plays an important contextual role in causing corruption. Moreover, the composition of the companies' board of directors is also found to be a key factor. By challenging the notion of a universal solution for corruption, this study suggests that national culture must be taken into account by policymakers in order to effectively combat it.

Keywords: Petrobras; Statoil; national culture; corruption; Brazil; Norway.

To my parents

PREFACE

This master's thesis was produced for the Department of Geography at the Norwegian University of Science and Technology (NTNU), and is the final work of the MSc in Globalization, Politics and Culture.

The topic of this study was chosen for several reasons. It is an overall result from my personal experiences living in Norway and Brazil, academic background in International Relations and particular interests for ethics, political economy and contextual approaches to real-life problems. Additionally, the current political crisis which Brazil is experiencing reinforced my wish to research about something that has kept me intrigued for a long time: the role of culture in the efficacy of political and economic institutions.

My years in Norway at NTNU represented for me much more than only academic learning. They represented personal growth, overcome challenges, and living through experiences that I could only dream of a few years ago. For all of that, I am immensely grateful.

I would like to thank Asbjørn Karlsen for the valuable feedback and insights on the content and delimitation of this study. I would also like to thank Anette for the guidance and understanding. Moreover, I thank Marcela, Cristiane and Sarry for the support during the months of writing this thesis. Finally, and most importantly, I thank my family for being who they are. I would definitely not be who I am today without their unconditional love and support through every step of my journey.

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ACRONYMS AND ABBREVIATIONS

ANP	National Agency of Petroleum, Natural Gas and Biofuels
BOD	Board of Directors
CEO	Chief Executive Officer
COAF	Council for Control of Financial Activities
CPI	Corruption Perception Index
EITI	Extractive Industries Transparency Initiative
IOC	International Oil Company
NCS	Norwegian Continental Shelf
NOC	National Oil Company
NPD	Norwegian Petroleum Directorate
NRGI	Natural Resource Governance Institute
PMDB	Brazilian Democratic Movement Party
PP	Progressive Party
PT	Workers' Party
RWI	Revenue Watch Institute
STF	Supreme Federal Court
TI	Transparency International
WVS	World Values Survey

1. INTRODUCTION

This thesis investigates corruption cases in two National Oil Companies (NOCs): Petrobras, from Brazil, and Statoil, from Norway. Through examining and comparing the particularities of each case and the national culture of each country, this study aims to acquire insights about the different levels of corruption experienced by these companies.

1.1 Background

Both Petrobras and Statoil have been known as well managed NOCs and are similar in many aspects. Besides that, both Norway and Brazil have a similar model regarding governance of Oil, with the separation of functions between ministries, NOC's and regulatory agencies. This model has been successfully implemented in only a few countries, including Brazil and Norway. However, Brazil is abandoning the status of a successful case due to corruption and bad management in Petrobras. Statoil has also experienced corruption, but in a minor dimension. In this sense, it is fair to admit that each country's experience should be understood while considering its particularities.

Dealing with corruption in a structural context of destructive incentives is not an easy task. Inequality of power and income hinders the ability of the masses to prevent harmful actions of elites and to punish offenders, as in the case of Brazil. On the other hand, Norway's context seems to have an impact on how corruption is dealt with, and on its degree.

Taking that into consideration, it is superficial to attribute the corruption in Petrobras solely to the fact that its majority owner is the government, since the same applies to Statoil. A study on two corruption cases in these companies contributes to the understanding of what caused corruption in them. Moreover, it can provide hints to what can be done to prevent it in light of the particular context of each case.

De Graaf (2007) states that corruption can be attributed to many factors, almost anything, "but while the opportunity exists everywhere, the degree of corruption varies widely among individuals, public agencies, administrative cultures and geographic regions". According to the author, this leads to a tension in corruption research between actors being regarded as autonomous agents making rational decisions and corruption being explained by causes beyond individual control.

In this context, this study compares the cases of corruption in Statoil and Petrobras in order to find an explanation for their contrasting outcomes. The major proposition is that national culture must be taken into account in order to find a satisfactory explanation.

1.2 Purpose of the study

De Graaf (2007) affirms that there are not many studies on actual, individual corruption cases, i.e., while there is a wide literature on the theory of corruption, there is a lack of studies applying theory to actual cases.

Furthermore, the corruption case in Petrobras brought attention to the company and its similarities with Statoil, creating a gap to be filled by research ("Petrobras Needs to Be Compared to Statoil", 2014). It is in this context that this thesis emerged as a comparative investigation of two corruption cases in Petrobras and Statoil.

1.2.1 Research question and hypothesis

In order to guide this study, it is important to define a clear and concise research question for it to answer. Thus, the research question of this study is formulated as such: *given the similarities between both companies, why have Petrobras and Statoil had significantly different experiences with corruption?*

Moreover, an initial hypothesis was developed in the early phase of the research: *a national culture that is related to more corrupt behavior increases the tendency of state ownership to become a mean for political capture and corrupt practices. Hence, national culture played a contingency role in the causal matrix of corruption in the cases studied.*

1.2.2 General and specific objectives

A more expanded guideline for the execution of this research was created by stating its general and specific objectives, which can be described as follows:

a) General objectives:

- Investigate what factors contributed for a notably higher level of corruption in Petrobras than in Statoil.
- Analyze the characteristics of both companies and their respective national culture contexts in order to examine the factors that contributed to the disparity between their experiences of corruption.

b) *Specific objectives:*

- Describe the history of Petrobras and Statoil, as well as the corruption cases.
- Understand theoretical and empirical literature in order to study why Petrobras and Statoil have had different experiences on corruption.
- Compare aspects of the cases based on the literature studied in order to acquire insights about the causes of a significantly higher level of corruption in Petrobras.

1.2.3 Relevance and contribution

According to Sims, Gong & Ruppel (2012), national culture plays a crucial role in guiding people's behavior. It is one of the most important contextual contingency factors to consider when studying corruption. However, the authors point that the contingency effect of culture on corruption is rarely investigated by the literature.

The implications of this lack of consideration for national culture in the literature on corruption can be very negative. This is because academic research provides guidelines for anti-corruption policies. Given that the more it is known about the causes of corruption, the better it can be decided which policy instruments are more appropriate to combat it, this study applies knowledge from existing literature to the cases of Statoil and Petrobras, in order to contribute to anti-corruption policymaking through an approach that investigates the causal role of national culture in these corruption cases.

As pointed by Yin (2003), to test propositions of broad theories often requires different studies. In this context, the research design of this study utilizes a theoretical framework as guidance at the same time that it contributes to the understanding of how the theory relates to specific real-life cases.

1.3 Structure of the study

For the sake of organizing this thesis and allowing a better comprehension of its content, it was divided in six major sections. First, this introduction briefly introduced the topic, addressing the research question, hypothesis and the contributions made by the research.

Second, the methodology section shows the methodological framework applied, evidencing the research method, design and the sources of information utilized. The third section is predominantly descriptive and addresses the histories of Petrobras and Statoil, followed by the presentation of the corruption cases.

After that, the theoretical framework section refers to existing theoretical and empirical literature to lay a theoretical foundation for the analysis. Finally, the analysis section compares and discusses both cases, and is followed by a conclusion section that summarizes the findings and suggests directions for further research.

2. METHODOLOGY

This section refers to the methodological aspect of this study. In order to do so, it first addresses the methodological approach, followed by the research method and design. Then, the literature and information sources are explained in order to clarify the data required and researched. Finally, ethical issues, validity, reliability and limitations of the study are discussed.

2.1 Qualitative research

The approach chosen to answer the research question was a qualitative one. Thus, it is vital to understand what it means to apply a qualitative approach to the research.

According to Creswell (2007), researchers bring their subjective worldviews, beliefs and paradigms to qualitative research. For that reason, the researcher must ensure that the theoretical frameworks and assumptions are described in the research. Furthermore, the author points the importance of being aware of your own subjective biases during the development of the research.

Taking that into account, qualitative researchers should try to apply a complex and holistic analysis of the problem studied. This includes considering multiple perspectives and identifying several factors which contribute to the investigation of the research question. In that sense, the researcher takes into consideration not only the complexity of the problem, but also the nuanced relationship between the variables involved. From that perspective, Creswell sums up that the researcher performs a *"complex process of data analysis through the ambitious task of sorting through large amounts of data and reducing them to a few themes or categories"* (Creswell, 2007, p. 41). In the scope of this thesis, this is related to the categories utilized for comparing both cases and to the initial proposition - the role of national culture - made from the research question, as it will be discussed in section 2.2.3.

2.2 Research method

After the qualitative approach is chosen, the researcher must select a more specific method through which the research will be structured and conducted. For the purpose of this thesis, the multiple case study approach was chosen.

According to Creswell (2007), a case study is a method which consists in approaching a topic through the analysis of one or more cases within a bounded system (a context or

setting). Yin (2003) defines a case study as an *"empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident"* (p.13). It is a research strategy in which contextual conditions are considered particularly pertinent to the phenomenon studied. For this research, the phenomenon studied is the occurrence of corruption in Petrobras and Statoil.

Before choosing a case study approach, the researcher should consider if it is indeed suitable to the research. A case study is a good choice when the researcher *"has clearly identifiable cases with boundaries and seeks to provide an in-depth understanding of the cases or a comparison of several cases"* (Creswell, 2007, p. 74).

Furthermore, there are several types of case studies, and there is no standard method for a case study research. They can be single or multiple, intrinsic (focused on the case) or instrumental (focused on an issue). Some create theories, others are entirely descriptive, or they are analytical and make use of cross-case comparisons (Creswell, 2007). The present case study can be regarded as intrinsic in the sense that it has a low number of cases and the findings are context-specific and cannot be generalized without a more careful evaluation. However, it can be argued that it also is instrumental in the sense that there is a specific issue being investigated (corruption) in light of the particularities of each case, even though it is in a context-specific setting. Rather than arriving at a generalized theory from the comparative examination of both cases, it is intended to describe the cases and then answer the research question through a cross-case comparison.

2.2.1 Comparative case study

Narrowing down the research method even more, a comparative case study was chosen as the most appropriate for investigating the research question. The choice is due to the specific characteristics of the comparative approach. As Goodrick (2014) explains, comparative case studies are appropriate when there is a need to understand the features within the context of the phenomenon studied, which in turn can be useful for tailoring interventions and policies to address the issue effectively. According to the author, the synthesis across cases through a comparison of similarities and differences is valuable not only to support or refute initial hypotheses, but also to explore the causal nature of the variables examined. For this purpose, each of the cases must be described in depth in order to

establish the foundation for the forthcoming comparative analysis. Section 3 aims to do that as it describes both the history of Petrobras and Statoil, as well as the corruption cases.

In an ideal setting, a cross-case study would be able to pinpoint with certainty the causal relationship between given variables. However, this is hardly feasible, especially when there is no opportunity to build an experiment - something impossible when studying social phenomena with a complex web of interconnected variables that have different degrees of causality among them. Nevertheless, comparative case studies can help to answer questions about causal contribution, rather than causal attribution (Goodrick, 2014).

In other words, by exploring similarities and differences between cases and linking theoretical literature to them, it is possible to systematize the research so that it becomes feasible. Additionally, it is crucial to develop initial propositions and choose the unities and levels of analysis in order to give a direction to the research and delimitate it, given that, initially, the variables are uncountable and belong to several levels of analysis. In this way, factors that appear to be most responsible for producing specific outcomes may be identified (Goodrick, 2014). For this study, the initial proposition suggests that national culture might be an important factor (causal contribution) to the occurrence of dissonant levels of corruption in Statoil and Petrobras.

Furthermore, according to Ragin (2013), comparative case studies also evaluate how different conditions or causes produce different results in different cases, i.e., depending on the context, which acts as an intervening variable. In the scope of this thesis, the proposition that precedes the hypothesis is that national culture affects the relationship between the influence of the state in the NOC and the occurrence of corruption. Even though this is a complex dynamic which is hard to prove, this research aims to provide insights about the causal contribution of national culture in the Car Wash/Petrobras scandal. The fact that some variables may have different effects depending on context is a key motivation for the development of this thesis. As Ragin (2013) further states, a factor may appear to be irrelevant when, in fact, it is fundamental in many causal relationships in both its presence and absence. That is the contingency aspect of national culture, which is addressed in section 4.

2.2.2 Selection of the cases

A crucial part of designing a case study is the selection of cases. In this regard, Creswell (2007) recommends choosing cases that show different perspectives on a problem,

in what is called purposeful sampling. It is important to evaluate whether the cases provide insights that can help the pursuit of action leading to the resolution of an existing or emerging problem, i.e., whether the results from the investigation are useful for policymaking.

The cases studied in this thesis - Operation Car Wash and Horton Scandal - were chosen purposefully, as they show two companies with close similarities, but also with a different experience of corruption. Using that sample, it is possible to perform an investigation that provides insights about the discrepancy between the corruption cases. In order to have a more detailed understanding of each case, the number of cases included was limited to two, since a deeper analysis is required (Goodrick, 2014).

As Seawright & Gerring (2008) note, practical matters such as available time and access to information influence case selection, even though they should not be the only factors considered. The authors suggest that the researcher must have clear intentions regarding his purposeful selection. Taking this into account, it is important to set clear research objectives and a concise and objective research question. Furthermore, the pertinence of the cases selected must be argued. As stated before, Petrobras and Statoil are similar in many aspects, however, they experienced corruption in a significantly different degree. Such view of these companies is reflected in the existing literature comparing them, even though corruption is not the focus of these comparisons. The focus on corruption is precisely the approach which differentiates this research.

2.2.3 Research design

According to Yin (2003), a research design defines the logical sequence that connects factual data to the initial research questions and, finally, to its findings. It guides the collection, analysis and interpretation of information, providing the researcher with the tools necessary in order to draw insights and inferences concerning causal relations. In the context of case studies, the author pinpoints several components of a good research design: 1) a research question; 2) its propositions; 3) units of analysis; 4) the logic linking the data to the propositions and criteria for interpreting the findings. In this thesis, these components are as follows:

1) *Research question*: case studies are more likely to be appropriate for "why" and "how" research questions. The research question of this thesis, addressed in section 1.2.1, complies with this recommendation as it is a "why" question.

2) *Propositions*: the initial propositions of a study direct attention to the factors that should be examined in the attempt of answering the research question (Yin, 2003). In that sense, they can be understood as plausible hypotheses which represent the very *raison d'être* of the study - its motivation. For the present research, they concern the influence of national culture in the different levels of corruption in Petrobras and Statoil. They reflect my previous contact with literature, years of observation and a multidisciplinary academic background. In that sense, they embody the subjective aspect of the research performed.

However, while these propositions - yet to be tested - are important in order to identify variables of interest to explore in more depth, its evaluation must stay open for new evidence and hypotheses that may appear during the realization of the study as the cases are compared (Goodrick, 2014).

3) *Units of analysis*: According to Ragin (2014), the term unit of analysis has been used to refer to both data categories and theoretical categories, generating confusion in the field of comparative social science. The confusion arises from the ambiguity that lies in the term unit of analysis. The author argues that most non-comparative social scientists have a clear understanding of the term. However, in comparative social science, where the analysis happens at one level and the explanation is often at another level (usually a macrosocial level), the duality between data category and theoretical category arises. In this sense, a distinction between observational and explanatory units is made. Observational unit is the unit used in data analysis and collection, while the explanatory unit is the one used to account for the pattern of results found (Ragin, 2014). Taking this into consideration, the unities of analysis of this research are Petrobras and Statoil - observational unities at the organizational level. Additionally, the explanatory unities are Petrobras, Statoil (accounting for variables at the organizational level) and the Brazilian and Norwegian societies (accounting for national culture). Thus, explanatory unities are spread across the organizational and societal/national levels of analysis.

4) *Logic linking the cases to the propositions and criteria for interpreting the findings*: these two factors are usually the least well developed in case studies (Yin, 2003). However, this study attempts to address them properly. In order to elaborate on the logic linking the cases to the propositions, section 4 discusses a theoretical framework. More specifically, part of that section addresses the relationship between national culture and corruption, and its logic is further developed in section 5.

Regarding the criteria for interpreting the findings, the qualitative nature of the analysis adds a significant level of subjectivity to them. Nevertheless, assuming the

subjectivity of the interpretations, as well as considering possible alternative explanations before affirming a causal attribution - rather than causal contribution - increases the reliability of the criteria. Specifically, the criteria for interpreting the findings is the association between the cross-case analysis of variables and the theoretical foundations explained in the theory section.

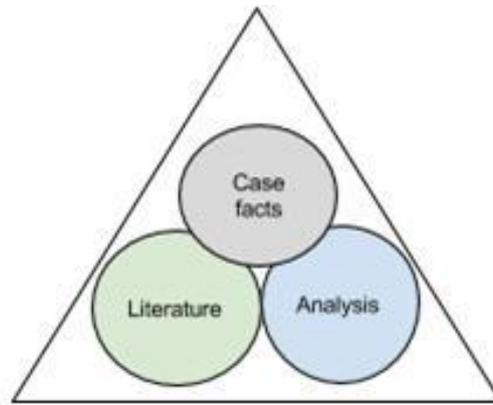


Figure 1. Pillars of the thesis' research design (Monash University, 2018).

In sum, the research design of this thesis aims to address one of the most challenging tasks when performing a case study, which is to connect the theory to the analysis of the cases, finding the interrelation between case facts, literature/theory and analysis (Monash University, 2018).

2.3 Sources of information

The major sources of information for this research are documents. According to Bowen (2009), document analysis is particularly appropriate to qualitative case studies. It is a systematic procedure for reviewing and discussing the content of documents. In fact, it requires the researcher's interpretation in order to produce meaning and understanding. Merriam (1988) adds that documents of all types can provide the researcher with insights relevant to the research problem.

Documents are widely accessible, as they are available through many online databases and are obtainable without the requirement of the authors' permission. Furthermore, they have a low cost for the researcher - compared to other research sources - and provide broad coverage (cover a long timeframe or many events). They also lack obtrusiveness and reactivity, i.e., they are not affected by the research process. As a result, the possibility that

the researcher influences the data obtained is inexistent, contrary to the use of interviews, for instance (Bowen, 2009).

Nevertheless, the high availability and accessibility of documents does not imply that they are less time-consuming for the researcher than primary data is, and the search for pertinent documents that add valuable information and insights to the research can be a long process. Moreover, considerable amount of time is spent on comparing, interpreting and drawing meaning from the documents (Bryman, 2016).

This time-consuming analytic procedure consists, as stated by Labuschagne (2003), in finding, selecting, evaluating and synthesizing the information contained in those documents. As part of this process, the researcher extracts excerpts, quotations or entire passages from the documents and then proceeds to organize them in different themes or categories in order to perform content analysis. In this thesis, the categories and themes addressed consist in the parameters for performing the cross-case comparison.

Nonetheless, the researcher must not simply copy words and passages from available documents. Rather, it is necessary to establish meaning and connections between the data and arguments utilized, having in mind their contribution to the issue explored in the study (Bowen, 2009).

For that reason, the document analysis in this study takes the research question into account in order to obtain understanding about the main topics analyzed. The description of the cases, the historical background of the companies, the theoretical framework and the comparative analysis and discussion were all based on a variety of documents published in English, Norwegian and Portuguese, including academic literature, government documents and reports from international organizations.

The documents were obtained mainly through search in databases such as Google Scholar, JSTOR, NTNU's Oria platform and Google Books. In the case of Google Books, the books found were later searched on the Oria database in order to obtain full access to their content. Several keywords were searched for - both alone and in combination - in Norwegian, English and Portuguese, among which are Petrobras, Statoil, Brazil, Norway, corruption, national culture, corporate governance, organizational culture, transparency, institutions, NOC, oil, Norwegian Model, contingency theory, Horton and Operation Car Wash.

2.4 Ethical issues, validity, reliability and limitations

Given the fact that documents as a source of information are not affected by the agency of the researcher, many ethical issues that would apply to other methods of data gathering are inexistent in documentary research. However, the qualitative nature of the study - allied with a sensitive topic such as linking corruption to national culture - requires an ethical commitment from the researcher's part. Moreover, the researcher's bias is actively present in the selection of documents utilized. Hence, a clear and honest account not only of the methodology, but also of its validity, reliability and limitations is desirable.

Choosing to study macrosocial variables such as national culture in order to provide explanations to phenomena is, according to Ragin (2013), a conscious choice of the researcher, influenced by the reality of countries, nations or states. Such realities represent the sociocultural context in which the researcher is embedded as a citizen, and, in trying to interpret them, the subjective nature of this interpretation will be evident. I make this clear when noting that the initial proposition which hypothesizes national culture as an important causal factor for the higher level of corruption in Petrobras was influenced not only by academic resources, but also by my own subjective experience of both national cultures.

As already discussed, this study presents aspects of both a case-oriented strategy - due to the low number of cases and the tendency towards particularizing the results - and of a variable-oriented one - in the sense that it produces somewhat general statements about relationships between aspects of both cases through analyzing covariation of variables (Ragin, 2013). By combining aspects of both strategies, this research intends to draw deeper insights than in a variable-oriented research, while at the same time being able to find indications of causal relationships - through linking theoretical framework with the cases - that can encourage both further case studies on the same topic and new approaches to evaluating anti-corruption policymaking.

The use of macrosocial units is useful for comparative case studies as they provide foundation for explanatory statements. Nevertheless, their macro aspect implies a considerable level of generalization, since it is not feasible to account for all variables that take part in the complex causal matrix of social phenomena. In this sense, even though I consider other variables that could also have contributed to the occurrence of the corruption cases studied, the selection of the variables considered is part of the delimitation of the thesis, and represents a direct influence of the researcher on the study. Furthermore, I do not make

use of quantitative methods and consider the variables categorically rather than quantitatively. Still, much of the literature discussed has a quantitative approach.

Another issue to be mentioned regarding the validity, reliability and limitations of the study is that of measurement of macro variables. According to Seleim & Bontis (2009), the use of subjective perception to measure cultural dimensions and corruption is prone to biases. Perception of corruption levels, cultural values and practices might be affected by factors as level economic growth, political systems and level of education and awareness. Especially concerning variables at a national level, subnational variations are hidden (Klitgaard, 2017). Clarifying the delimitation of the study and its levels of analysis is what makes the research feasible, even though it sacrifices a certain amount of scientific certainty.

On the same note, Smits (2013) points that while studying national culture, researchers take the risk of assuming that all members of a country carry the same cultural characteristics, or that the behavior of an individual can be totally predicted by its cultural background. I avoid this mistake by suggesting causal contribution, rather than causal attribution, while at the same time attempting to subjectively evaluate the importance of this causal relationship.

In what comes to measuring corruption, Klitgaard (2017) reminds that there are different types of corruption, so any measurement of corruption is a generalization. In the cases studied, bribery is the main form of corruption, and the suggestion of national culture as a causal contributor encompasses all types of corruption. While this generalization is used by the literature reviewed in this thesis, I also perform a qualitative analysis that looks deeper into the logic behind the relationship between national culture and corruption in Petrobras and Statoil. Moreover, variables in the organizational level - which are possible to be measured more accurately - are also analyzed, balancing the generalizing nature of macrosocial variables.

The matter of causal attribution brings considerable challenges to the research. It is known that the presence of covariation among variables does not necessarily imply causation. The existence of a logical reasoning behind any covariation is key in order to suggest any causal relationship. Adding to that, Ragin (2013) explains:

"In situations where causation is multiple and conjunctural, there may be no necessary or sufficient conditions for an outcome of interest. For example, if outcome Y occurs following the combination of X1 and X2 or the combination of X3 and X4, then none of the single conditions (X1 through X4) is either necessary or sufficient to produce Y. This possibility complicates the observation of causal relations in non-experimental settings" (Ragin, 2013, p. 27).

Non-experimental settings are characteristic in case studies, as it is infeasible to manipulate the cases. Therefore, the researcher plays a key role as the selector and interpreter of the data collected. The presence of critical analysis has the advantage of enabling the identification of nuances that a less subjective research design would not be able to grasp. In consonance with what Goodrick (2014) states, the qualitative comparative analysis of this study allows the examination of categorical variables for a deeper understanding of the cases. Allied with critical thinking, it conveys a better approach to evaluate the causal relationships addressed in the case study. For example, the view of culture as a contingency factor (elaborated in section 4.3.5) comes from the recognition of a non-linear pattern of causality.

Methodological issues also arise in relation to hypothesis testing in this study. In social sciences, hypotheses testing is limited by the non-experimental nature of the research, as previously stated. The choice of a comparative case study research design is an attempt to minimize this limitation, considering that cases may be regarded as available experiments for the researcher to choose from. Instead of performing the impossible task of designing a perfectly appropriate experiment, I purposefully chose what I found to be the best cases available for the sake of understanding a specific issue. The choice was based on the cases' many similarities, but still highly dissonant outcomes. In other words, I chose cases that allowed me to reach conclusions with the best amount of confidence as possible. For this task, applying critical interpretation to the facts in light of plausible hypotheses - supported by both logical propositions and existing theoretical framework - is therefore indispensable.

3. HISTORICAL BACKGROUND AND CASE PRESENTATION

This section aims to present a historical background of both Petrobras and Statoil, as well as to describe in detail the events that defined the two corruption cases investigated in this study, in order to provide a sense of their particularities.

3.1 Petrobras

Founded in 1954 after the national congress decided to create a state monopoly in the national oil industry, Brazil's NOC Petrobras is remarkable for being a particularly successful NOC. As of 2011, it was Latin America's largest public traded company, regarded as a well-managed and efficient leader in the industry (Oliveira, 2011).

The company started without significant oil reserves or technological expertise, and having no aspirations of being either a source of fiscal revenue to the government or an instrument for general public policies such as job creation. On the contrary, the company received fiscal subsidies from the national government during its first twenty years of existence. In this context, the company was protected from political interference on the condition that it met certain government objectives, e.g., import substitution. In other words, the idea was to value national production (Oliveira, 2011).

Its history can be segmented in three major periods. First, from its creation until the discovery of offshore oil in Campos Basin in 1974, the company mainly had its monopolistic focus in organizing the Brazilian downstream - refining, marketing and distributing. Nevertheless, after creating a national infrastructure for the supply of oil products to consumers, the company gradually found itself in need of more oil resources, and, with the discovery of the first field in the Campos Basin, a new chapter in the companies' history began. Petrobras developed its technological and logistical expertise through a process of learn-by-doing and became an international reference in the industry (Oliveira, 2011).

The removal of the companies' monopoly in 1997, part of a broad wave of neoliberal reforms in Brazil, represented another turning point in Petrobras' history. The government intended to expose its NOC to competition, while at the same time attracting International Oil Companies (IOCs) to the domestic market. Furthermore, it partially privatized the company and sold its shares to national and international investors. However, the government maintained the majority of voting shares and the ability to choose the majority of the board of directors (BOD) as a political concession to nationalists. In this context, while aiming to preserve its dominance in the market, Petrobras applied its acquired competence in

technology, logistics and managerial capabilities in order to not only increase production at a national level, but also to find opportunities to operate overseas (Oliveira, 2011).

From this point, the company's results were remarkable. By 2008, Brazil became self-sufficient in oil, with a framework in which the NOC led the national oil industry while at the same time enabling IOCs to play complementary roles (Oliveira, 2011). The recent discovery of deep pre-salt fields in the Brazilian coast brought the attention of politicians to the regulation of their exploration. In fact, the government turned its attention to the creation of a sovereign fund in order to manage the revenue from pre-salt oil exploration. Illustrating that intention, in 2009 the Brazilian president Luis Inácio Lula da Silva had a meeting with then Norwegian prime minister Jens Stoltenberg, expressing that

"now that we found a lot of oil in Brazil, we are very interested in learning about the Government Pension Fund of Norway, in order to create something similar and use the wealth created by petroleum exploration to help our people, rather than just burn combustible" (Guimarães, 2011, p. 104).

These aspirations make it even more crucial that the management of oil revenues by the Brazilian government is shielded from corrupt practices. While Brazil is a medium-income country with a considerably diversified industrial sector and a technologically advanced NOC, it still faces huge challenges, especially when it comes to the efficiency and transparency of public administration. It is still a developing country with prominent social challenges, and if it intends to make the best use of its natural resources, it needs to apply a strategy that takes its structural deficiencies into account (Schutte, 2013).

3.1.1 Operation Car Wash scandal

Currently, Petrobras is in the center of the biggest corruption scandal in Brazil's history. The Operation Car Wash was named as such because Alberto Youssef, one of the black-market currency dealers involved in the scheme, used a petrol station and its car wash to launder money (Figueiredo, 2016). It unfolded a corruption scheme that involved top level executives from Petrobras - appointed through political negotiations - who received bribes in exchange for awarding overpriced contracts to corrupt private firms.

Corrupt actors in this case include private companies, Petrobras executives and politicians/political parties. Similarly, the benefited from the scheme were private companies,

politicians/political parties and Petrobras executives. On the other hand, the affected actors were Petrobras, minority shareholders, the Brazilian state and, as a consequence, the Brazilian people. The particularity of this case comes from the fact that politicians and executives of the NOC used revenues from oil exploration for personal gains, characterizing political capture.

As of February 9, 2018, 72 criminal accusations were made against 289 people. Moreover, 182 sentences were reached against 118 people, totalizing a sentence time of 1809 years in prison. Additionally, \$11.1 billion dollars were demanded as compensation, and the total amount of bribes paid reaches \$1.9 billion dollars (Ministério Público Federal, 2018). For instance, one single construction of a refinery involved the embezzlement of one billion dollars (Souza, 2014). In the end, Petrobras' financial losses are most likely to be covered by the Brazilian taxpayers, given that the state holds the majority of its shares (Almeida & Zagaris, 2015).

The investigation started by chance, when analysts from the Council for Control of Financial Activities (COAF), Brazil's financial intelligence unit, noticed frequent bank transactions of large sums of money between firms that did business with Petrobras. These companies lacked technical and operational expertise that could justify these transactions, arousing suspicion of criminal activity (Almeida & Zagaris, 2015).

While Paulo Roberto Costa - a former Petrobras director who was responsible for billion-dollar contracts - was first being interrogated about his relationship with Alberto Youssef, his two daughters and sons-in-law were at his office gathering documents in order to hide them. As a result, the authorities found the office practically empty when they arrived with a search warrant. Luckily, an elevator camera recorded his relatives evading the place with bags filled with documents. He was arrested for attempting to destroy evidence, but was later released. However, when he was arrested a second time a few months later due to his secret bank accounts overseas, he decided to collaborate with the authorities in exchange for concessions in his sentence (Figueiredo, 2016). His revelations started a seemingly endless snowball process through which the biggest corruption scandal that Brazil has ever witnessed came to surface. Besides him, several other executive directors from Petrobras have already been convicted.

Construction companies played a key role in the corruption scheme, as they paid bribes to congress members, party leaders and Petrobras executives in exchange for overcharged billionaire public contracts, e.g., for the construction of refineries. Furthermore, they created a cartel system for deciding which of its member companies would get a

contract, hiring middlemen through fake consulting contracts and organizing the distribution of bribes and electoral donations (Figueiredo, 2016).

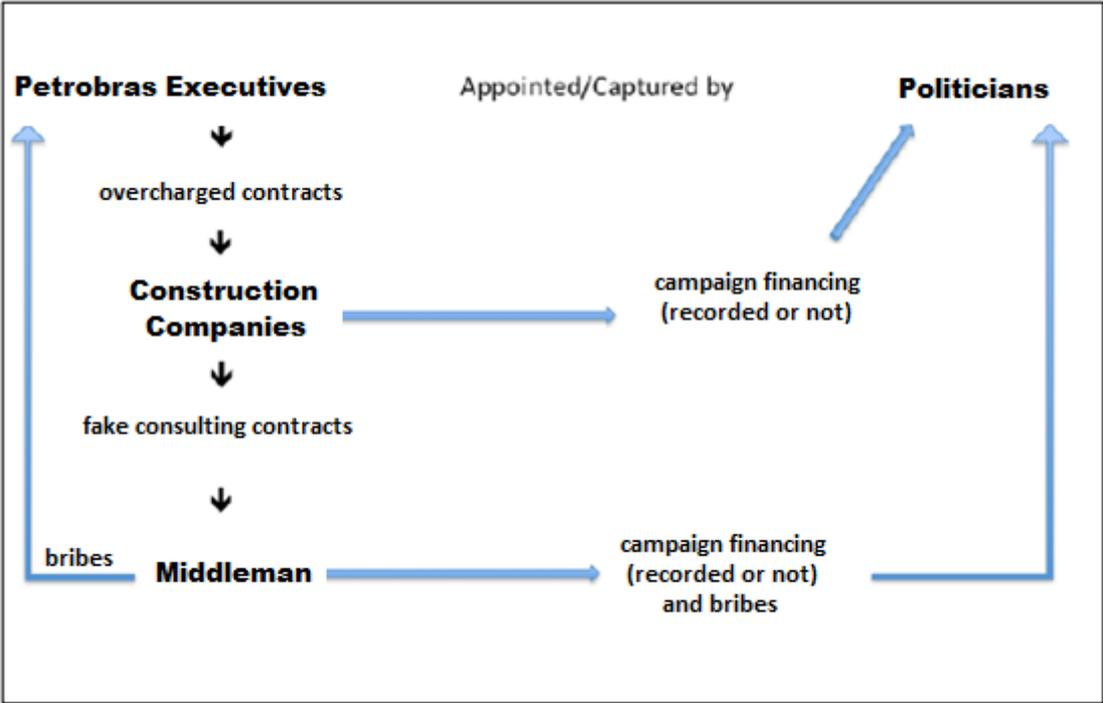


Figure 2. Money flow in the Operation Car Wash scandal (adapted from Figueiredo, 2016).

The figure above portrays the pattern of money flow in the corruption scheme. Petrobras top executives signed overcharged contracts with construction companies, which in turn financed political campaigns both directly and through a middle man, and paid bribes to politicians and Petrobras executives. This pattern of corruption occurred in at least three departments of the company for a period of at least ten years. The directors of these departments controlled the procurements in their respective areas. Between 1.5% and 3% of the overpriced contracts were directed to members of the party that appointed the executives to their positions, as well as to members of other parties in the same coalition. Namely, Paulo Roberto Costa (supply and refining director) was appointed by politicians from the Progressive Party (PP), Renato Duque (services director) was appointed by the Workers' Party (PT), and Nestor Cerveró (international affairs director) was chosen by members of the Brazilian Democratic Movement Party (PMDB) (Figueiredo, 2016).

The habit of using political nominations to designate Petrobras' executive directors is a key feature of the Operation Car Wash scandal. The close influence of politicians in the company's affairs epitomizes the political capture aspect of this case. Understanding the

dimension of the issue of political capture is essential in order to produce an informed analysis of corruption in Petrobras.

As mentioned by Almeida & Zagaris (2015), on March 6, 2015, a list of politicians who were investigated by the Supreme Federal Court (STF) for involvement in the scandal can provide an idea of the scale of the problem. A quick look at the list reveals that it included fifteen senators, twenty-one Congress members, thirteen former Congress members and one former governor. Among them are names such as Fernando Collor de Mello, current senator and former Brazilian president from 1990 to 1992, when he resigned due to corruption allegations and an imminent impeachment.

Furthermore, then governor of the state of Maranhão Roseana Sarney was on the list. She is the daughter of Brazil's former president José Sarney. The presidents of both the Senate and the House of Representatives were also included, along with former Chief of Staff during Dilma Rousseff's presidency and former ministers of finance and energy during Luiz Inácio Lula da Silva presidency. In other words, the scope of the scandal is not only about the top management of Petrobras, but also about the top management of the Brazilian state.

To put the icing on the cake, the party which most appeared on the list was the PP, co-founded by Paulo Maluf, former mayor and governor of the city and state of São Paulo, who has been on Interpol's Red Notice list since 2010 (including during his mandate as senator) due to a conviction of money laundering in the United States. He was finally arrested on December 20, 2017 for corruption crimes in Brazil, interrupting his mandate as a senator and is currently in prison.

This list provides us with a strong notion of misuse of trust by politicians in a systemic and structural fashion, and Petrobras, in spite of all its merits and management practices, was heavily utilized for private gains by groups of powerful people.

In this context, it is vital to note that members of Petrobras' BOD have traditionally been nominated by the office of the president. In the 2000s, when the Operation Car Wash corruption scheme was functioning and undiscovered, those nominations were chosen by the parties that constituted the coalition of the ruling government. These parties were, namely PT, PP, PMDB, as referred before. All in all, the level of sophistication of the scheme was paramount and systematic, as it exemplified by Almeida & Zagaris:

"companies that win contract bids typically aim at making from 10 to 20 percent on top of costs...for every service rendered. However, winning bidders were also required to add an average of 3 percent as "political adjustment"... Under the scheme, even lower ranking Petrobras employees were able to amass millions of dollars in corrupt money. In his Department of Supply, Costa revealed that out of the 3 percent that companies paid in bribes, 2 percent on average was paid to the PT and 1 percent to the PP. Of that one percent to the PP, 60 percent was paid to the party, 20 percent was used to pay costs...(falsification of documents and money transfers, for example), and the remaining 20 percent was split between Costa and the money changer, Alberto Youssef" (Almeida & Zagaris, 2015, p. 90).

Taking that into account, it is fair to confront the conventional idea that, as a NOC, Petrobras is a successful case of prevention of political influence and capture (Figueiredo, 2016). The Operation Car Wash showed that the company has huge challenges for the future in terms of preventing corruption. In this regard, the intrinsic political nature of the scheme presents an opportunity for researchers to evaluate the occurrence of corruption in Brazil's NOC through the optic of the country's particular cultural, social and political context.

3.2 Statoil

Statoil, Norway's NOC, was created in 1972. Similarly to Petrobras, it is regarded as a NOC which is highly similar to an IOC in what concerns governance, performance and business strategy. Throughout its history, the company became a technologically capable producer of oil, with expertise in deep water and harsh environments due to its activities on the Norwegian Continental Shelf (NCS). Furthermore, its growth is intimately connected to its relationship with the Norwegian state, which involves a framework with separation of policy, regulatory and commercial functions of oil exploration (Statoil being responsible for the commercial part). The Norwegian Model, as this framework is better known, is considered a benchmark for oil governance around the globe (Thurber & Istad, 2011). The importance of good governance in oil is particularly important in Norway, since the petroleum sector is a major pillar of the national economy and is responsible for securing state revenue, employment and R&D with spillover to other sectors (Eriksen & Søreide, 2017).

Statoil's creation is intrinsically related to the historical context of oil exploration in Norway. From the start, Norway's oil policy was focused on maintaining control over the sector, instead of simply maximizing revenue (Thurber & Istad, 2011). Thus, the state decided

to apply its then industrial taxation system to the oil sector and attract IOCs without the use of Production Sharing Agreements, awarding the first licenses in 1965 after settling border issues with the United Kingdom and Denmark. In this context, the initial exploration of the NCS was mostly performed by IOCs (McGroary, 2015). This characterizes the first key period of Norway's history of oil exploration, until 1969. During that period, a legal and administrative framework and a licensing system were developed. To this day, the outlines of oil governance in the country remain significantly unchanged (Al-Kasim, Søreide & Williams, 2008; Thurber & Istad, 2011).

In 1969, the Ekofisk field was discovered in the North Sea. It was the largest offshore oil field in the world at the time of its discovery, and represents a turning point in Norway's history of oil exploration, initiating a period of extensive exploration, rapid growth in resource base and development of oil-related legislation. However, it is important to note that the Norwegian petroleum industry was developed in a very particular context of solid institutions (Al-Kasim et al., 2008). It was in this context that Statoil was created. In its early years, the company was protected by the government, with a guarantee of 50% of all domestic fields, thus reducing risks and allowing the company to partner with well established IOCs in order to acquire technological expertise (McGroary, 2015). The support from the state enabled its growth through long-term, technically ambitious projects and a focus on innovation and R&D, which turned out to be essential as the government gradually removed the company's privileges (McGroary, 2015; Thurber & Istad, 2011).

In 1985, Norway approved the Comprehensive Petroleum law which expanded on the existing legal framework and created a more all-encompassing one, starting a period of maturation and expansion of oil production in the country (Al-Kasim et al., 2008). During this period, Statoil began to distance itself from the influence of the state, expressing the need to create an independent corporate identity and governance structure. For its part, the state cooperated, allowing the company to expand overseas in the 1990s, and eventually listing it on the Oslo Stock Exchange and the New York Stock Exchange in 2001 (Thurber & Istad, 2011). Today, the interest of both the government and minority shareholders is that of maximizing profits, and the company's non-commercial goals are mainly limited to ensuring wealth creation and wealth management for the Norwegian people (McGroary, 2015).

The Norwegian experience in oil exploration reveals that the state, backed by broad political consensus, had a fundamental role in the development of the sector. Its interference in the early years provided Statoil with the support needed to grow and compete with foreign

companies. However, it must be acknowledged that the private sector also contributed significantly for the development of the industry (Guimarães, 2011).

State ownership in Norway's petroleum sector is part of a long tradition of political commitment to boost industrial development and ultimately benefit the country's population. In this sense, the government explicitly emphasizes law compliance, social responsibility and zero-tolerance to corruption (Eriksen & Søreide, 2017). Nevertheless, the strengths of the Norwegian model have not completely prevented corruption to happen within Statoil.

3.2.1 Statoil-Horton case

In 2004, Statoil was fined by Norwegian authorities the equivalent of \$2.9 million for illegal activities in Iran, namely influencing decision-makers in the Iranian oil industry through the payment of bribes. The company signed contracts worth \$15.2 million with consulting company Horton Investment to win licenses to operate in the region (Al-Kasim et al., 2008).

Corrupt actors in this case are Statoil, Horton Investments and members of the Iranian government. On the same note, Statoil, Horton Investments and the corrupted bureaucrats were benefited. On the other hand, the affected part was Iran, which had its oil resources managed in a faulty manner for the benefit of few government actors.

Iran was among Statoil's priorities for its international activities. In order to increase its presence in the country, Statoil entered an agreement in 2002 with Horton Investment, an Iranian company, in order to obtain important information concerning future exploration projects and opportunities. However, the agreement had some questionable aspects. First, one of the main actors in the company was Mehdi Hashemi Rafsanjani, director of the Iranian NOC and son of Iran's former president, whose family has been accused of several corruption cases (Vaaland & Heide, 2008). Second, both parts agreed to keep the contract a secret. Third, Statoil was the only client of Horton Investments. These facts raised suspicion that the contract was in fact a facade to cover the payment of bribes in exchange for business opportunities in Iran (Gravdahl, 2007; Sommerro, 2008).

Olav Fjell, then Chief Executive Officer (CEO) of Statoil, was warned of all of these issues by two internal audit units, but still allowed the agreement to be carried out. Even when he was made aware that part of the money was paid to an account in a Swiss bank, he did little to address the situation. As Vaaland & Heide (2008) point, the dubious consultancy agreement may not be a very significant fact per se, however, the company's top management

choice to ignore warnings from internal audits is the most worrying factor. As a result of this, the issue was leaked to the media by internal whistleblowers, bringing the case to the public agenda.

Politicians in Norway strongly reacted to the facts, being critical of the ambiguous activities the company was carrying out abroad. Members of both ruling coalition and opposition expressed their discontent with the fact that the agreement was not transparent, and reaffirmed the importance of high ethical standards in the activities of Statoil as a state-owned company. As affirmed by a politician, Norwegians, as owners, should be able to choose if they want to engage in dubious agreements in countries where corruption is widespread. In private companies, shareholders have the choice to sell their stocks if they do not agree with the moral conduct of the company, while Norwegian taxpayers do not have this choice (Gravdahl, 2007). Hence, even though the agreement would benefit Statoil commercially, a strong sense of moral was recognized in the Norwegian society in its criticism of it.

The repercussion of the case led the CEO to fire the vice-president of international operations. Later, the BOD fired the CEO, and eventually the chairman of the BOD resigned. Statoil was investigated and found guilty of corruption in both Norway and the United States. First, in the United States, Statoil could be prosecuted due to its listing in the New York Stock Exchange. In this sense, to avoid exclusion from the stock market, Statoil presented evidence of corruption to the American authorities, and in 2006 agreed to pay \$21 million to settle criminal and administrative charges. Moreover, the company received a \$10.5 million criminal penalty and allowed an independent audit company to verify the company's compliance with US regulations. Statoil specifically acknowledged paying bribes to an Iranian official in order to secure contracts, and accounting these payments improperly in its records (Eriksen & Søreide, 2017; Vaaland & Heide, 2008).

In Norway, the issue was first addressed by the criminal justice system only after the United States had pursued a case against Statoil. Even though the Norwegian government has an efficient history of controlling corruption at home, Eriksen & Søreide (2017) argue that the government often overlooks unethical business behavior of its state-owned enterprises abroad, and has undoubtedly profited from its lack of action to address the problem.

After the incident, Statoil took action and hired external auditors to evaluate all of its agreements in search for illegal or unethical behavior, and implemented a plan to reduce the risk of new dubious contracts. On a similar note, Statoil's ethical guidelines were improved

after the Horton case, and its executives now undergo training in order to ensure ethical compliance in all of the company's activities overseas (Vaaland & Heide, 2008).

4. THEORETICAL FRAMEWORK

This section aims to perform a literature review on corruption, national culture and causes of corruption (also in NOCs). Theoretical literature will be examined, as well as previous studies on the relationship between corruption and national culture.

According to Yin (2003), literature review must be regarded as a mean to an end rather than as an end itself. In this regard, the study of previous research is essential both to understand the current state of knowledge about the topic and to help develop insights for the research being performed.

4.1 Core concepts

Before addressing the causes of corruption, its relation to national culture and NOCs, it is imperative to understand what is meant by the concepts of corruption and culture.

4.1.1 Corruption

Corruption can be defined as the misuse of public power for private benefit (Seleim & Bontis, 2009). According to Svensson (2005), corruption is an outcome, resulting from the interaction between a countries' economic, cultural, legal and political institutions. It is true that such a broad phenomena is hard to be measured or compared among countries. Being an illegal activity, corruption has a secretive nature, which complicates its measurement. Moreover, corruption is seen in a variety of forms, increasing the challenges for a trustable measurement.

On the other hand, the author points that since corruption reflects an underlying cultural, economic, institutional, legal and political framework, its different forms are likely to be correlated. In this sense, cross-country studies on corruption have been exponentially growing for the past decades. In this regard, the Corruption Perception Index (CPI), produced by Transparency International (TI), has been widely used by researchers and policymakers as an indicator to produce cross-country comparisons (Svensson, 2005).

Corruption deeply affects a country. It undermines public business confidence, causes inefficiency and leads to other crimes, e.g. money laundering. Within a corrupt context, honest businesses lose opportunities and contracts because of their reluctance to participate in such practices, and the cost of doing business is increased. Furthermore, on a broad scale, extensive corruption hinders a country's economic growth and rates of investment (Sanyal & Samanta, 2002).

Pillay & Dorasamy (2010) describe two intrinsic dimensions of corruption: pervasiveness and arbitrariness. Pervasiveness represents the degree to which corruption is prevailing in a country. Hence, it can be understood as the likelihood of an average firm to be exposed to corruption in its interactions with bureaucrats, i.e., how likely it is that a company is asked for a bribe. Adding to this, arbitrariness refers to the intrinsic degree of ambiguity related to corrupt practices in a given country.

4.1.2 National culture

Williams (1998) categorically states that *"culture is one of the two or three most complicated words in the English language"* (p. 87). This is especially true when one realizes that, even though it is a familiar word for everyone, defining it is a complicated task. In spite of that, scholars have developed definitions of the concept. Geertz (1973) defines culture as a *"historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic form by means of which men communicate, perpetuate, and develop their knowledge about attitudes toward life"* (p. 89). On the same note, Hofstede (2001) defines it as *"the collective programming of the mind which distinguishes the members of one group or category of people from another"* (p. 9), and further suggests that the core element of any culture is its values.

One may argue that the adoption of a broad context - national culture - rather than a more specific one, e.g. organizational culture, in this study can be seen as generalizing. However, such generalization is supported not only by intuition or real-life observations of the researcher, but rather by academic literature. Additionally, focusing on national culture better accounts for the political aspect of the management of Petrobras and Statoil.

Regarding the relationship between national and organizational culture, Gulev (2009) underscores that it is logical to expect a certain level of correspondence between both, since organizational culture represents a synthesis of managerial methodologies that ultimately rely on human behavior. Similarly, Koen (2005) argues that it is widely accepted that the societal level influences the organizational level, i.e., the people inside an organization are embedded in a broader national context, so that cultural manifestations at a mesolevel reproduce a macro cultural structure. This is exemplified by, for example, employee motivation.

Furthermore, Hofstede (2001) suggests that organizational culture has a national component linked to the nationality of the organization's founders and top management

personnel. It is evident that organizational and national culture are not the same thing, however, existing literature points that national culture is a strong component of organizational culture, especially when it comes to companies in which the state is the major shareholder, such as Petrobras and Statoil.

4.2 Causes of corruption

As previously stated, corruption is the outcome of a context which encompasses a wide range of variables. Expressing this idea, De Graaf (2007) recognizes that there are so many explanations to why corruption occurs that the complexity of the phenomena makes it impossible to arrive at a comprehensive conclusion concerning the causes of political corruption. Even though there is no consensus about its causes, the literature on corruption provides several explanations that help understand it.

Several scholars contribute to the debate. Smits (2013) pinpoints three broad types of factors associated to corruption: institutional, economic and cultural. Acemoglu, Johnson & Robinson (2001) suggest that, in former colonies, institutions were set in order to benefit the colonizer, rather than the colony. Institutions that benefited the colony were only implemented when Europeans settled in large numbers. Therefore, considering that diseases were a major factor why Europeans would settle in the colonies, the authors suggest that colonies with an inhospitable environment were more likely to become corrupt countries due to the type of institutions introduced by the colonizer.

Sanyal & Samanta (2002) reinforce this notion, highlighting that bribery is more likely to occur under specific institutional settings, often present in developing countries. The list goes on. Accountability from the government, poor economic conditions, legal enforcement, political structure, severity of penalties for corruption, almost anything can be regarded as a cause of corruption (De Graaf, 2007; Fisman & Miguel, 2007; Klitgaard, 2017; Rose-Ackerman, 1999; Sanyal & Samanta, 2002).

For the purpose of this study, the focus of the causal investigation is directed to national culture due to several factors. First, both cases involve a similar formal institution framework and considerably different national cultures. Second, previous research suggests that same institutions may function differently in different cultures (Alesina & Giuliano, 2015). Finally, as previously mentioned, there is a gap in literature regarding case studies that examine the relationship between national culture and corruption.

Studying corruption is useful in the sense that, the more we know about its causes, the better we can choose which policies to adopt in order to prevent it. In this sense, De Graaf (2007) presents several groups of theories on causes of corruption, and encourages a reflection: "*which causal chain makes most sense, and leads to the most interesting insights?*" (De Graaf, 2007, p. 69). Having reflected upon this question and considered the approaches presented by the author, I chose the societal and organizational-level theoretical approaches as foundations for this study.

According to the author, organizational-level theories have the underlying assumption of a causal path between a certain culture and a certain mental state, which in turn leads to corrupt behavior. It is important to note that theories at the organizational level include not only companies, but also the organizational structure of the government, for instance. In this sense, this theoretical approach focus on failure in the "proper machinery" of government, rather than faulty character, as the cause of corrupt behavior by government officials.

Hence, a corollary of that is that national culture may affect the optimal functioning of governmental institutions. Such approach helps explain the structural and lasting nature of the corruption in Petrobras more than an explanation focused on faulty character does. Moreover, its assumptions imply that reorganizing incentives would work as a policy for combating corruption, which is more feasible in terms of policymaking than addressing faulty character.

Regarding the societal-level approach, it is concerned with culture in the broad context of society. According to its logic, macro factors work through the level of the organizations - thus connecting both levels of analysis -, and represent a structural nature of corruption. De Graaf (2007) further notes that empirical research concerning the societal level seems non-existent, since its causal chains are hard to prove empirically. In this regard, the author points that case studies offer the advantage of presenting details of actual cases and their contexts. As he states, "*it is safe to say that we know next to nothing about which corruption controls are most efficient under different circumstances*" (De Graaf, 2007, p. 66). It is based on this idea that this thesis aims to compare Petrobras and Statoil in light of the cultural contexts in which they exist.

It can be argued that, by considering broad levels of analysis, this thesis does not present explicit causal chains. This is a valid criticism, however, rather than a direct causality, this thesis proposes that national culture acts as a contingency factor which strengthen a causal chain.

The choice of not focusing on the individual (the corrupt official) is also justified by the dimension of the scandal in Petrobras, with widespread corruption over a long period of

time. Although the individual level of analysis may be appropriate to understand the Statoil-Horton case, this study rather argues that the difference in corruption in Petrobras and Statoil cannot be understood without a macrolevel approach.

Furthermore, theories with a broad level of analysis consider a contagious aspect of corruption, almost as if not becoming corrupt in certain cultures means betraying the group (De Graaf, 2007). This aspect also helps to explain the huge number of politicians and other powerful people involved in the Car Wash scandal.

In sum, this thesis pinpoints the structural nature of corruption that was observed in the Operation Car Wash. In fact, corruption was already in 2007 seen by the Brazilian population as the second most important problem to be addressed - years before the scandal in Petrobras was uncovered -, and was a major cause of the protests of 2013, when two million people went to the streets of 438 cities in the country to protest against the country's politics (Souza, 2014).

4.2.1 Grand corruption and NOCs

This subsection reviews literature on corruption in the specific context of governance of oil and NOCs.

According to Dicken (2011), no other industry sector has as much state interference than extractive industries. The author suggests that the reason for this relies in the territorial embeddedness of the resources. Thus, the access to these resources is controlled ultimately by the state with sovereignty over the territory where they are located. As a result, NOCs control around 90% of the world's oil reserves, and it is estimated that 60% of the undiscovered reserves are located in areas to which NOCs have privileged access (Tordo, Tracy & Arfaa, 2011).

From the standpoint of state, the strategic significance of oil is evident, as it serves as a major pillar of the economy. Therefore, most developing countries that are rich in oil have their own NOC, which are often an instrument for corruption. The role of the state in the oil industry varies from policy formulation, legislation, control of access and establishment of NOCs, and this complex structure offers several opportunities for corrupt practices to happen (McPherson & MacSearraigh, 2007).

In this regard, Aslaksen (2007) indicates a relationship between oil extraction and levels of corruption, both in democratic and nondemocratic countries. According to the author, bureaucrats in oil-rich countries can personally benefit from firms they control. On the

other hand, it is more valuable for the public to avoid corruption, which leads to more accountability. Nevertheless, it must be noted that this causality does not always happen, since the population's ability to hold bureaucrats accountable depend on several other aspects, such as cultural traits, institutions, political freedom and access to information.

The concept of grand corruption refers to corruption that occurs at the highest levels of government. A common occurrence of grand corruption is through the payment of bribes from private actors to government officials in order to obtain major concessions or contracts. In these cases, the amount of money involved causes a major loss to the state budget and the country's growth. When the government (or a state-owned enterprise) makes public bids or contracting services, a private firm might pay bribes to bureaucrats in order to be included in the list of prequalified bidders, to acquire inside information, to have the bidding specifications manipulated in its favor so that the company is the only qualified bidder, or to be directly selected as the winning firm (Rose-Ackerman, 1999). The logic behind bribery is to encourage deviation from what would have been decided in its absence, i.e. what would have been in the best interest of the government or state-owned company. It is a compensation paid to decision-makers so that they commit an ethical deviation and consequentially harm the institution they represent. A corollary of this is that corruption can sabotage any goal or rule of any organization or institution (Al-Kasim et al., 2008).

In the context of a NOC, which has both commercial and non-commercial objectives, corruption can undermine its performance and results. From a principal-agent perspective - the principal being the owner of the company and the agent being the managers -, it is expected that the agent acts in the best interest of the principal.

However, when the agent perpetrates corrupt practices, the principal is often unaware due to information asymmetry and as a consequence suffers financial losses. Since in a NOC the principal is ultimately the country's citizens, the agents are the managers of the company, and the principal role is played by elected politicians, it can be concluded that misconducts from the agents will have major impacts in the benefits received by the country's citizens, especially when the *de facto* principal (politicians) is also involved in corrupt behavior for personal benefits (McGroary, 2015).

In this context, the petroleum industry is one of the most vulnerable sectors when it comes to corrupt practices (Eriksen & Søreide, 2017). Corruption in this sector is amplified by the fact that many oil companies hide the identities of their equity holders and subsidiaries, allowing corrupt leaders to hide stolen funds. Furthermore, inadequate financial reports enable the disguise of corrupt deals. Taking this into consideration, as well as the fact that

stolen oil income has serious consequences for a country, TI (2018) emphasizes that NOCs should increase their transparency. This includes providing detailed financial reports at a country level, informing what measures are taken to prevent corruption, meeting international accounting standards and allowing independent auditing of their accounts. Hence, transparency is regarded as a primary step for preventing corruption in NOCs.

4.3 National culture and corruption

Cultural values affect the propensity of people to tolerate corruption and their view on competition, material wealth, egalitarianism, among others (Sanyal & Samanta, 2002). Exploring that idea, this subsection aims to further elaborate on the relationship between national culture and corruption, and how they can be compared across countries.

Even though there are several political, institutional, economic and psychological approaches to explain corruption, a large proportion of the variation in corruption levels among countries remains unexplained. In this regard, national culture has been neglected as a possible explanation for different levels of corruption between countries (Pillay & Dorasamy, 2010). Overlooking culture as an important contributive factor for corruption has been an issue not only in academic research, but also in the context of creating and implementing policies (O'Connor & Fischer, 2011). This may be due to the bold suggestion that some cultures might be more corrupt than others, which touches a sensitive topic.

Nonetheless, it is true that national culture is expected to influence corruption. For instance, cultural dimensions may affect the subjective perception of ethical situations by an individual. Although research on the topic is still recent and new, studies have provided empirical support for the influence of certain aspects of national culture on corruption, even after controlling for economic and human development. Furthermore, national culture (macrolevel variable) mediates the effect of microlevel variables on corruption (Pillay & Dorasamy, 2010; Seleim & Bontis, 2009).

According to Klitgaard (2017), a person's decision to be corrupt is influenced by both cultural norms and a risk/reward evaluation. In this sense, the author argues that, in a "corrupt culture", a kind of prisoner dilemma might occur, in which a corrupt equilibrium may arise even if all the officials wished they were honest and efficient and all the people paying bribes wished they did not. This implies that, sometimes, not being corrupt may be a costly choice, resulting in a loop of corrupt practices.

Taking this into consideration, the challenge for policymakers is to disrupt corrupt equilibriums by altering people's risk/reward calculations through the introduction of policies that change incentives, rather than engaging in the difficult enterprise of trying to change cultural values and beliefs. Considering that high executives are grown up in a certain national culture, and that national culture is a central influence in the way employees understand work and expect to be treated, a policy for preventing corruption that takes the national culture into account is necessary (Klitgaard, 2017; Koen, 2005).

When a prisoner dilemma is in place and corruption is structural and embedded in a culture, each individual may have little incentive not to take part in it. Exemplifying this notion, Klitgaard (2017) reveals: *"I relate the story of an African president who told me that he understood that corruption constrained his country but that his party's finances were based on corruption. "If I fight this sort of corruption, I will fall, or perhaps even be killed," he said. "How should I begin?""*(Klitgaard, 2017, p. 5). Such dynamic is deep rooted and hard to break.

Talking about "corrupt cultures" implies suggesting a predisposition of a population to engage in corrupt behavior. In order to make such suggestion, empirical studies must use indicators for the variables national culture and corruption. While the CPI from TI is widely utilized as the indicator for corruption, the World Bank's control of corruption measure has also been considered by some researchers. When linking these measures of corruption to the broad concept of national culture in empirical studies, researchers make use of several dimensions of national culture that have been identified and measured, namely the World Values Survey's (WVS) traditional-rational and survival-expressive dimensions, family ties, and Hofstede's individualism/collectivism and power distance dimensions, which are considered in this thesis.

4.3.1 Traditional-rational and survival-expressive dimensions

The WVS, a periodic survey that started in the 1980s, constitute a major source of comparative data between countries. The survey addresses demographics, economic status, values and beliefs. From this data, researchers have derived two cultural dimensions. The first one moves from tradition to reason. At one end of the spectrum, traditional values concern the importance of religion, parent-child ties, traditional family values, deference to authority and rejection of divorce and abortion. At the other end, secular-rational values refer to the

opposite, i.e., lower importance of religion, traditional family values and authority, while being more tolerant to divorce, abortion and euthanasia (Klitgaard, 2017).

The second cultural dimension goes from survival mode to individual expressiveness. At one end of the spectrum, survival values refer to a high focus on physical and economic security, as well as low levels of tolerance and trust. At the other end, self-expression values refer to tolerance to diversity, gender equality and participation in political matters. As Klitgaard (2017) found out, these two dimensions explain 62% of the variance in TI's 2014 CPI through correlation.

4.3.2 Family ties

Similarly to the dimensions above, the measurement of family ties was developed using data from the WVS. Alesina & Giuliano (2010) combined three questions from the survey regarding the importance of family for a person, the duties of parents and children, and love and respect for parents. By comparing this indicator (strength of family ties) to the World Bank's measure of political stability and control of corruption, a negative correlation was found for both, namely a r value of -0.61 for political stability and -0.54 for control of corruption, suggesting that countries with stronger family ties tend to be more corrupt (Klitgaard, 2017).

4.3.3 Individualism-collectivism dimension

The individualism-collectivism measure of national culture was created by Hofstede. It is related to family ties, but it goes further. At one end of the spectrum, individualism can be understood as a

"preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. Its opposite, Collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we" ("National Culture", 2018).

Regarding the relationship between this dimension and corruption, Klitgaard (2017) finds that the higher the level of individualism in a country, the better it scores on the CPI, with a correlation coefficient of $r=0.64$. Furthermore, other authors have examined this relationship, concluding that collectivism is likely to encourage corruption, nepotism and clientelism. Smith & Hume (2005) reached results that support the hypothesis that people in individualistic societies are more likely to act accordingly to their personal principles, even if it implies in weaker results for the organization they are part of. On the other hand, in collectivist societies, people are more likely to put group expectations over individual principles.

In this context, Alesina & Giuliano (2015) pointed to the fact that, even though an individualistic culture has impact over institutions, institutions also have an impact on culture. Nevertheless, the authors point that this impact is lower than the other way around. Thus, it can be argued that national culture is a major factor on how institutions are developed and how efficient they become (since different institutions function differently in different cultures, as previously argued). As a consequence of that, national culture also influences the occurrence of corruption from this perspective.

There is a logic behind the causal influence of collectivism on corruption levels - adding a causal nature to the existent correlation. This is because, in collectivist societies, public servants face a sense of competing moral obligations: while it is their duty to be impartial and not corrupt, they may also experience a moral obligation to favor family and friends, even if it means engaging in corrupt behavior. Hence, regardless of whether they choose to be corrupt or not, there will be a residue of moral guilt. Any moral choice will also leave, to a certain degree, a sense of doing something wrong (Klitgaard, 2017). This genuine moral dilemma is at the core of the influence of national culture on corruption, and is key in order to have a better understanding of the cases approached in this thesis.

4.3.4 Power Distance

Finally, power distance is also a cultural dimension that helps to explain corruption. Also developed by Hofstede, this dimension measures

"the degree to which the less powerful members of a society accept and expect that power is distributed unequally. The fundamental issue here is how a society handles inequalities among people. People in societies exhibiting a large degree of power distance accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low power distance, people strive to equalize the distribution of power and demand justification for inequalities of power" ("National Culture", 2018).

The logic behind the causal relationship between power distance and corruption lies in the fact that a higher degree of power distance implies lower accountability, i.e., fewer checks and balances to prevent the abuse of power. Moreover, people in countries with high power distance tend to judge a dubious business deal or contract as ethical, in opposition to what happens in a country with low power distance (Pillay & Dorasamy, 2010). Analyzing the correlation between this dimension with corruption, Klitgaard (2017) found that the higher the power distance in a country, the worse it scores in the CPI, with a correlation coefficient of $r=-0.63$.

4.3.5 National culture as a contingency factor

It is evident that national culture is not the only macro variable that affects levels of corruption in a country. Nevertheless, it is here argued that it differs from other variables, e.g. institutions and human development, in the sense that it behaves mostly as a precondition, rather than an outcome, in the complex and multivariable matrix of causality that determines corruption. This is because culture is something deeply rooted in a population. In order to understand the deep roots of cultural values, it is useful to consider multidisciplinary theories. One recent theory, suggested by several researchers, is that there is a relationship between the individualism-collectivism dimension of a culture and the historical exposure of a population to parasites and pathogens. This relationship may sound strange at first, but it has a clear logic behind it (Klitgaard, 2017).

This theory brings attention to the fact that some regions of the world have historically presented a greater intensity and diversity of pathogens due their climate conditions (exposure to ultraviolet radiation and humidity). As consequence of a higher prevalence of infectious diseases, populations adapted through three major processes: genetic adaptation, migration or behavioral immune systems. Our attention is drawn to the latter, which refers to cultural

adaptation, such as harsh group discipline, distrust towards strangers and greater power distance. In this regard, researchers have found a correlation of $r=-0.68$ between a nine-item measure of prevalence of infectious diseases and Hofstede's measure of individualism (Klitgaard, 2017). In other words, the collectivist dimension of a culture is partly explained by regional differences which precede the development of modern institutions.

Nonetheless, this is not to say that there are culture specific genes. Rather than that, a person learns a culture through the process of interacting with his or her environment (Sanyal & Samanta, 2002). For the purpose of this thesis, the relevant insight that can be drawn from this theory is that, even though national culture can be changed throughout time, it should be regarded as a given variable, since it has roots deep enough to resist a change through policymaking - not to mention the fact that engineering cultural change is both undesirable and infeasible.

Bearing that in mind, this study emphasizes the contingency role of national culture when it comes to corruption. As Sims et al. (2012) point out, contingency theory proposes that the effectiveness of a policy depends on the conditions under which it is implemented. In this sense, the institutional arrangements of a country shape social structures and patterns of behavior that ultimately influence the actions of public officials, but they do so in potentially different ways, depending on the cultural context in which these institutions are implemented (Pillay & Dorasamy, 2010).

Therefore, rather than offering universal solutions for problems such as corruption, one must understand that there exists no *panacea*, thus any policy proposed to prevent corruption should take contextual factors into account. When it comes to corruption in Petrobras and Statoil, the challenge is to find the optimal equilibrium between a solution and its context.

In order to find that equilibrium, it is crucial to first understand that, in modern times, the relationship between national culture and corruption does not lie in the existence of populations with a worse moral than others. Rather than that, we may understand it as a historical process of path dependence (influenced by both culture and institutions) through which "*good people, trapped in a corrupt structure, become corrupted as they do their best within the given economic, legal, institutional structure*" (Light, 2013, p. 3).

To conclude, we are left with two main approaches to circumvent corruption. First, we may try to change a culture. This solution is both unfeasible - due to the deep roots of culture - and undesirable - in the sense that cultural traits have good aspects as well. Second, we can

work to change the decision-making context of an agent, increasing risks and diminishing rewards of engaging in corruption (Klitgaard, 2017).

Therefore, although cultural traits that increase the likelihood of corruption should be considered in order to understand and explain corruption, they should not be regarded as determining factors which inevitably lead a country into a corruption trap.

5. ANALYSIS AND DISCUSSION

The main purpose of this section is to answer the research question stated in the introduction: *given the similarities between both companies, why have Petrobras and Statoil had significantly different experiences with corruption?* For this purpose, a comparative analysis of the main characteristics and contexts of both corruption cases will be performed.

Bearing in mind De Graaf's (2007) affirmation that there is a lack of studies applying theory of corruption to actual cases, variables on both the organizational and national level - such as institutional framework, corporate governance, corporate culture, transparency and national culture - were considered in order to identify the ones that most differ between the cases, thus providing valuable insights to better understand the discrepancy between corruption levels - here represented by the Operation Car Wash and Horton cases - in Petrobras and Statoil.

5.1 Petrobras and Statoil

NOCs around the world are well known for being a typical environment for corrupt practices and inefficiency (McPherson & MacSearraigh, 2007). Nevertheless, it is also true that Petrobras and Statoil have been long recognized as exceptions to this statement, serving as role models in terms of good management practices.

Historically, these two companies have faced similar technological challenges that fostered their adaptation and development to become financially and technologically strong NOCs. On the one hand, Petrobras acquired its expertise in deep water exploration through a process of learn-by-doing in the Campos Basin, in the coast of Brazil. On the other hand, Statoil developed its culture of technological innovation by exploring oil in the North Sea (Mendonça, 2012). In both cases, the role of the state as a regulator and financial supporter was crucial for their success. In this sense, a challenging geology and ample government support allowed them to act as a drivers of development of their domestic oil industries through huge investments in R&D - even to a higher degree than IOCs (Thurber & Istad, 2011).

The similarities between the companies are far from being reduced to a historical context. Besides being known for having efficient organizational structures, these NOCs present a very similar organizational culture. In fact, Statoil officials themselves consider

Petrobras as the company most similar to Statoil when it comes to organizational culture (Thurber & Istad, 2011).

5.1.1 Institutional framework

As stated before, oil-rich countries should be extra careful when taking measures to prevent corruption. As Mahdavi (2016) points out, there is a general perception that oil causes corruption - to the point that oil's corrupting effects are explicitly mentioned by policies' objectives and NGOs. Thus, the author investigates what makes corruption vary so greatly among oil-rich countries, and suggests that the institutional infrastructure of oil exploration in a country is a fundamental factor in explaining this variation. Specifically, Mahdavi states that countries where NOCs have the authority to award concessions have higher levels of oil-related corruption in comparison to countries without NOCs or with NOCs that do not possess regulatory discretion, thus arriving at the conclusion that certain institutional frameworks may reduce the corruption effects of oil.

In this context, Norway represents a benchmark in terms of an institutional framework for the governance of oil. In the early 1970s, Norway adopted a clearly defined division of functions in the oil sector. In this context, the Ministry of Petroleum and Energy would be responsible for legislation and policy making, e.g. awarding licenses, while the Norwegian Petroleum Directorate (NPD) would manage technical and regulatory issues, e.g. gathering data on activities, collecting fees from operating companies and advising the Ministry on technical issues. Finally, Statoil would be responsible for commercial activities (Tănase, 2018).

This institutional setting for oil governance, known as the Norwegian Model, has been successfully implemented in other countries, including Brazil. As pointed by Thurber, Hults & Heller (2011), Norway and Brazil are outstanding cases of successful application of this model. In Brazil, the implementation happened in 1997 with the creation of the National Agency of Petroleum, Natural Gas and Biofuels (ANP), which became responsible for regulatory matters. By that time, Petrobras was already a powerful world competitor, and the country's bureaucracy had become stable and thus able to supervise the commercial activities of the NOC (Tănase, 2018).

However, as Mahdavi (2016) recognizes, the Car Wash scandal contradicts the hypothesis that such framework inhibits corruption. According to the author, his hypothesis is

unable to explain corruption when institutions remain unchanged in a country. In fact, this is because there is no single factor that predicts or determines corruption. Therefore, having a regulatory NOC does not necessarily cause corruption, in the same way that dividing functions as in the Norwegian Model does not inevitably decrease corruption.

These findings support the argument proposed in this thesis, which looks at a variable with deeper roots in a country than its institutions, i.e., national culture. The idea is to regard national culture not as a direct determinant of corruption, but rather as a contingency variable that represents the context in which any given factor exerts its causal influence. In other words, national culture is argued to be a fundamental contextual variable that influences the effectiveness of policies against corruption. For instance, officials of the ANP - the regulatory agency in Brazil - were caught requesting bribes from private companies, which hinders the efficacy of the creation of the agency in the first place (Musacchio & Lazzarini, 2014).

Hence, it is reasonable to conclude that *"efforts towards comparative analysis between Brazil and Norway in the context of oil exploration should continue, including aspects that have not been directly addressed yet"* (Guimarães, 2011, p. 113).

5.1.2 Transparency reports

Transparency is recognizably a useful measure for preventing corruption. In order to compare Petrobras and Norway in what comes to transparency, it is useful to analyze reports from international organizations, namely TI and the Natural Resource Governance Institute (NRGI), former Revenue Watch Institute (RWI). The four latest reports on the topic are analyzed here, two of which are in the company level (2008 and 2011), and two in the country level (2010 and 2017).

1) 2008 report (company level):

In this report, TI evaluates the policies, management systems and performance of 42 leading oil and gas companies in order to measure and compare their revenue transparency in upstream operations. The report considers the disclosure of information in three areas considered vital for accountability: payment to host governments, operations and corporate anti-corruption programs.

In this report, both Petrobras and Statoil are among the eight companies that present high revenue transparency out of a total of 42 evaluated. In order to be rated as such, a company has to, among other things, make a public commitment to revenue transparency and

anti-corruption regulations, provide information concerning the management procedures for enforcing such regulations, publish accounting reports for each country in which it operates and disclose information on contractual arrangements.

More specifically, the report found that NOCs operating at home show better results, and that Statoil and Petrobras were consistently figuring as the best NOCs in terms of transparency in operations both at home and abroad, providing a benchmark for revenue transparency. In addition, both companies are supporters of the Extractive Industries Transparency Initiative (EITI), the most important multi-stakeholder initiative working to promote transparency in the sector (TI, 2008).

2) 2010 report (country level):

The Revenue Watch Index, jointly produced by TI and the RWI, is the first attempt to compare governments' transparency in extractive industries. The index evaluated 41 resource-rich countries in several categories, among which that of state-owned companies - or NOCs, in the cases of Petrobras and Statoil.

The score in this category reflected the availability of information concerning the company's activities and governance structure, and was based on factors such as: disclosure of information about the company's operation, compliance with internationally recognized accounting standards, auditing and publishing of audited reports, publication of information about quasi-fiscal activities and requirement that government officials reveal information about their financial interest in the company's activities.

The data was gathered by independent consultants, and the results confirmed the trends from the previous report. Both Brazil and Norway scored the maximum (100) in the NOC category, and, in the overall results, Brazil figured in the first place with a score of 97, while Norway appeared in second, with 96.4 (RWI, 2010).

3) 2011 report (company level):

In this report, RWI and TI analyzed 44 major oil and gas companies from 30 countries, covering three major categories: reporting on anti-corruption programs, organizational disclosure (reporting on organizational structure, partnerships, operations and accounting standards) and country-level disclosure (international operations).

Regarding anti-corruption programs, Statoil figured in third place with 81 points out of 100, while Petrobras was 10th, with 64 points. However, it is important to mention that IOCs

were also analyzed, and that among the NOCs, Statoil and Petrobras figured in first and second place, respectively.

The organizational disclosure category measured transparency regarding subsidiaries, partners, field of operations, as well as the reliability of the company's accounts. Statoil and Petrobras obtained the fifth and sixth best score, respectively. Here, it is important to mention that this category is closely related to the nature of corruption in the Car Wash scandal.

The third category - country-level disclosure - shows Statoil in the first place, while Petrobras is in ninth (second NOC). This result puts in evidence the commitment of Statoil to publish country-level information, especially after the Horton case (related to its operations in Iran). Considering that both companies achieved the highest score on transparency in terms of domestic operations, it can be inferred that their difference in overall country-level disclosure does not help to answer the research question of this thesis. Rather than that, it illustrates Statoil's efforts to prevent reoccurrence after its corruption case in Iran.

Finally, the report underscores that, out of the 44 companies analyzed, only eight scored above average in all three rankings, Statoil and Petrobras being the only NOCs on the list (TI, 2011).

4) 2017 report (country level):

The latest report in the company level was the 2011 report described above. However, a more elaborated version of the RWI's 2010 country level report was published in 2017 by its successor organization, the NRGi, making it the only report published after the Car Wash scandal was uncovered.

Differently from the three other reports, the 2017 Resource Governance Index does not intend to be only a transparency report, and was not produced in partnership with TI. More than that, it aims to present an overarching measurement of policies and practices that governments employ to manage their oil resources. It is the result of 89 detailed country assessments, supported by almost 10,000 documents used to answer 149 questions about each country. Therefore, it is a reliable assessment of a country's institutions regarding oil governance. Concerning the overall results, Norway ranked first with a score of 86 out of 100, while Brazil ranked sixth, scoring 71.

The index is divided in three components: value realization, revenue management and enabling environment. A closer look at their subcomponents and their measurements provides us with some interesting insights. First, the governance of state-owned enterprises appears as a subcomponent of value realization. In terms of this indicator, Norway scores 80 out of 100,

which puts it in fourth place. On the other hand, Brazil scores 65, appearing in 21st. This is a larger gap than it would be expected based on the three previous reports. In this sense, the relatively worse rank of Brazil in this aspect reflects the impact of the Car Wash scandal, rather than helps to explain it.

Furthermore, the largest gap between Brazil and Norway appears when it comes to assessing the countries' enabling environment, with Norway scoring 97 and Brazil, 72. This component covers measurements of factors including government effectiveness and control of corruption, both influenced by the contributive aspect of culture as a contingency factor, as it was discussed before (NRGI, 2017).

5) Summarizing:

The reports analyzed show that Statoil and Petrobras score remarkably high in terms of transparency and compliance with international accounting standards. Understandably, the latest report shows that Petrobras lost some of its reputation after the Car Wash Operation, the biggest corruption scandal in Brazilian history.

To conclude, the measurements of transparency and good governance of oil in Brazil/Petrobras and Norway/Statoil do not present any compelling discrepancies that could help explain the variation in corruption levels in the cases studied. Quite the contrary, they suggest that both should present a low level of corruption if transparency was a determining factor. Evidently, this is not to say that transparency does not work as an efficient measure to prevent corruption. Instead, it means that transparency in itself is of little help when contextual variables hinder its quality.

5.1.3 Corporate Governance

The corporate governance of NOCs is regarded by the academic literature as being generally less efficient than that of IOCs, whether it is in terms of transparency, accountability, financial auditing or management structures. Thus, NOCs' ability to create value is relatively inhibited, and the possibility that corrupt practices emerge is increased (Tordo, Tracy & Arfaa, 2011).

Nevertheless, as it has been argued, Petrobras and Statoil are exceptions to this trend. Much of this is due to the fact that they have been partially privatized, i.e., listed on stock exchanges. In this sense, the governments of Norway and Brazil promoted the adoption of

best practices in the companies by issuing shares to private stakeholders - which in turn demanded increased transparency and commitment to commercial objectives (Musacchio & Lazzarini, 2014).

The listing of Petrobras and Statoil implied their corporatization, i.e., the reorganization of their governance structure, which became more similar to that of a modern corporation - with a CEO and a BOD. Furthermore, the stock prices of a listed company reflect its performance. Therefore, listing a NOC is regarded as an efficient way to improve its performance and transparency (Musacchio & Lazzarini, 2014).

Whereas the professional management of a listed company is selected by its BOD - theoretically isolating the firm from political intervention -, a closer look at the corporate governance structures of Petrobras and Statoil show that Petrobras did not manage to keep the state - political influence - at arm's length.

NOC	Country	Listed NOC	Total gov't share of voting stock	Size of BOD	External board members	BOD members appointed by gov't	Board members term (years)	Gov't officials on BOD	CEO and chair of BOD are not same person	Chairman is an external board member and non-gov't official	Budgetary autonomy	External auditors	Governance index'
Statoil	Norway	Y	70.8	10	7	0	2	N	Y	Y	Y	Y	7
Petrobras	Brazil	Y	55.7	9	2	6	1	Y	Y	N	N	Y	3

Table 1. Corporate governance in Statoil and Petrobras (adapted from Musacchio & Lazzarini, 2014).

The table above illustrates the corporate governance structures of Statoil and Petrobras. They are similar in several factors, such as being both listed, having different CEOs and chairs of BOD and employing external auditors. However, the differences between them are remarkable because they reveal a greater vulnerability for political influence in Petrobras. First, some investments need government approval in Petrobras, while Statoil has budgetary autonomy. Second - and most importantly -, Petrobras' BOD is filled with government officials and government appointees. Hence, although both CEOs are chosen by the BOD, in Petrobras this process is a political one, with the president having the final word on who will run Petrobras.

As a consequence of that, it was observed that Petrobras' CEO has changed after three out of the last seven presidential elections, whereas Statoil's CEO term is relatively independent from electoral cycles. In average, Petrobras' CEOs stay in their position for three years, while in Statoil they stay for seven years (Musacchio & Lazzarini, 2014).

Taking this into account, it is clear that even though Petrobras' corporate governance scored well in terms of transparency and international governance standards, the fact that the company's directors are not independent put it in a vulnerable position (Azumendi, 2015). Eventually, this resulted in the political capture of Petrobras' top managers, which, paired with a national culture that favors corruption, provoked the biggest corruption scandal in Brazil's history.

On this note, it is useful to look at the case of Paulo Roberto Costa, one of Petrobras' executives involved in the corruption scheme. He was an engineer who entered the company in 1979 and built a technical career there. However, in 2004 he became the director of the refining and supply department after being politically appointed by politicians from parties of the ruling coalition. In his testimony, he revealed that he had to overcharge contracts and give them to certain companies, which in turn paid bribes to politicians. According to him, this *modus operandi* was part of the deal to keep his position as director (Figueiredo, 2016).

As it can be seen, the political and systematic nature of Petrobras' corruption case is substantially different from the Horton case in Statoil, which was more isolated than structural and can be satisfactorily explained without the need of including national culture as a particularly important factor.

According to Tordo et al. (2011), cultural differences across countries play a major role in explaining why similar corporate governance structures can produce very different results. In this sense, the authors pinpoint the cultural context - particularly the way power and authority are exerted - as a contingency factor to be considered when formulating policies for the oil sector.

In accordance to that, this thesis aims to compare the national cultures of Norway and Brazil in light of the cultural dimensions presented in section 4.3.

5.2 National culture in Brazil and Norway

The decision to focus on national culture, rather than organizational culture, in order to explain the difference between the corruption cases addressed in this study is twofold. First, the organizational cultures of Petrobras and Statoil are considered very similar, as previously mentioned. Second, the theoretical support to the macro approach is both promising and relatively new, hence the relevance of case studies on the topic.

In this context, this subsection compares Brazil and Norway in terms of their national culture, more specifically the cultural dimensions covered in the theoretical section.

1) *Traditional-rational and survival-expressive dimensions:*

Analyzing the figure below, it can be noticed that Brazil has a considerable higher tendency towards the tradition-end of the traditional-rational dimension, whereas Norway presents more secular values. Additionally, Brazil presents a higher degree of survival values than Norway in the survival-expression dimension, as opposed to self-expression values. As stated in the theoretical part of this study, traditional and survival values are linked to higher corruption levels, explaining 62% of the 2014 CPI.

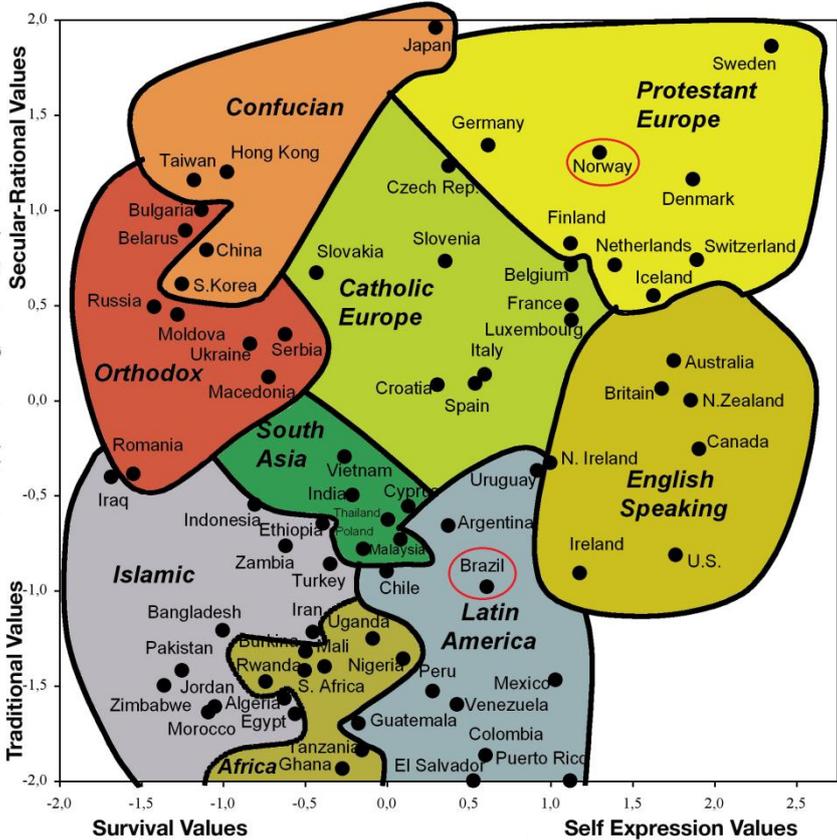


Figure 3. Cultural map based on the WVS. Brazil and Norway highlighted by me (WVS, 2018).

2) Family ties:

Scandinavian countries are known to be among countries with the weakest levels of family ties, while Brazil - along with other Latin American countries - tends to have a more family-based society (Klitgaard, 2017).

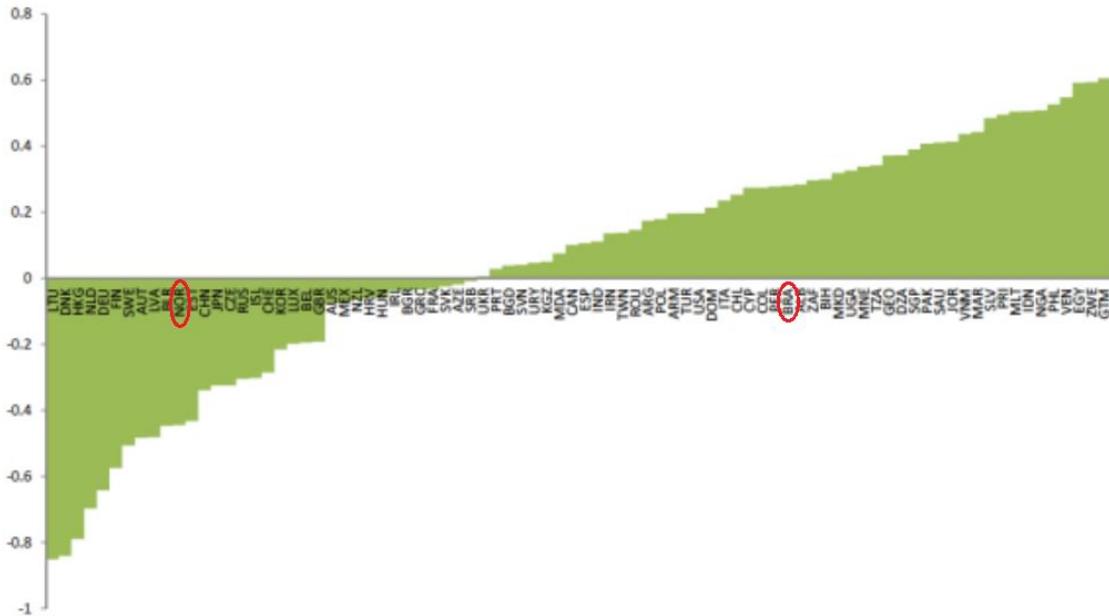


Figure 4. Strength of Family ties. Brazil and Norway highlighted by me (Klitgaard, 2017).

The figure above, which illustrates the country-level measurement of family ties developed by Alesina & Giuliano (2010), shows a high variation between Brazil and Norway (marked in red). Being closely connected to high levels of collectivism, strong family ties correlate negatively with political stability and control of corruption, as it was pointed in section 4.3.2.

3) Power distance and individualism:

Similarly to the dimensions compared above, the scores of Norway and Brazil in Hofstede's cultural dimensions of individualism and power distance corroborate the hypothesis that differences in national culture are crucial for understanding the variation in corruption between Petrobras' Car Wash scandal and Statoil's Horton case.

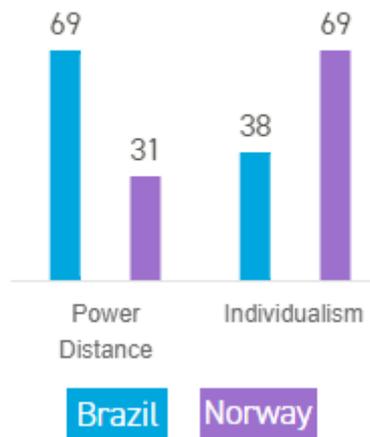


Figure 5. Individualism and Power distance in Brazil and Norway ("Country Comparison", 2018).

As the graph above shows, Norway scores 69 out of 100 in terms of individualism, while Brazil scores 38 - thus being closer to the collectivist end of the spectrum. Moreover, Brazil presents a higher power distance, scoring 69 against 31 in Norway. As argued before, high levels of collectivism and power distance create a contingent cultural context that positively influence levels of corruption.

Similarly to cultures with high power distance, which tend to be more tolerant to ethically questionable behavior, collectivist societies present high levels of conformity and obedience, discouraging whistleblowing and enhancing the pervasiveness of corruption (Pillay & Dorasamy, 2010).

Since power distance and individualism function as an important contingency factor of corruption, anti-corruption laws or policies may not work in a given culture, even if they are effective in others (Sims et al., 2012). In the context of this study, Norway and Brazil show significant cultural differences, which should not be overlooked when trying to understand corruption - particularly in cases in which other factors do not sufficiently explain difference in corruption levels, e.g. the cases addressed in this thesis.

5.3 The case for a cultural approach

According to Rangel & Tonon (2017), the current literature on corruption fails to establish a relation of causality between corruption levels and a country's effort to reduce it.

Building on this, recent research suggests that the efficiency of anti-corruption policies depends on national culture, pointing that certain countries have a culture that is more conducive to corruption (Smits, 2013).

Nevertheless, considering national culture when studying and addressing corruption is still a new trend. This is because there is a tendency for the literature on the topic to assume cultural convergence between countries instead of cultural variance, which becomes less and less important. On the one hand, it is true that globalization brings some level of cultural convergence to the world. On the other hand, this assumption is dangerous because it leads to the belief in a "culture-free management" ethos with universal legitimacy, i.e., the idea that anti-corruption policies are universal and will work anywhere. As Smits (2013) further emphasizes, even though there are indications that culture must be considered when implementing anti-corruption policies, the current trend among policy advisors is for the adoption of a universal solution, produced by observing societies which managed to reduce corruption.

While it is evident that some measures are helpful in any case, one must be careful enough to consider the contingency role of national culture in the efficacy of these measures. Particularly, this is of special importance when making decisions regarding the level of power that the state should have. In the corruption cases here studied, this means taking national culture into account when deciding what level of involvement the state will have with its NOC, in order to avoid corruption. This thesis proposes that there is a special need to keep the state at arm's length in countries with a culture that is more vulnerable to corruption.

In this sense, when the corruption cases in Petrobras and Statoil are compared in light of the specific events and the type of corruption in each of them, national culture appears as a factor which helps to explain what other variables alone fail to. Petrobras and Statoil have similar histories, with a strong and important role of the state in their development. Furthermore, factors such as transparency, partial privatization, organizational culture and institutional framework do not help explaining the variation between their experiences of corruption.

In this regard, corporate governance - particularly the composition of the BOD - was found to be an important variable. Coupled with national culture, it highlights the fact that grand corruption emerged in Petrobras from a politically dependent BOD embedded in a context of systemic corruption - deeply rooted in the national culture. The scandal in Petrobras revealed corruption practices that started more than a decade before they were

discovered, while the scandal in Statoil was an isolated event, which also involved actors from a culture that is considered corrupt (in the terms presented in this thesis).

Thus, in accordance to what Rangel & Tonon (2017) proposed, it is here argued that the role of national culture in answering the research question of this thesis is based on the idea that corruption in Brazil is better understood in light of culture, rather than purely objective variables. According to the authors, Brazil has a culture with high tolerance for small, daily corrupt practices. These may be exchange of favors, payment of bribes, use of positions in the government for personal benefit or benefit of close friends and family, etc.

As a result, Brazil presents a context in which special groups manage to obtain private benefits from the government through corrupt practices, including grand corruption. The Operation Car Wash scandal appropriately exemplifies this logic. It was a scheme of grand corruption based on the political capture of Petrobras by politicians for private gains. Additionally, a group of large companies and businessmen was paying bribes for being awarded contracts which were not in the best interest of Petrobras. These two groups - politicians and businessmen - were protecting each other in order to be able to steal money that, ultimately, came from the Brazilian taxpayer. That is a prime example of the influence of collectivism and power distance in corruption.

On the same note, Brazil suffers from a culturally rooted structure in which actors become likely to engage in corruption even if it goes against their moral. As revealed by the investigations, businessmen who paid bribes to Petrobras' executives stated that they had to be corrupt if they wanted to be awarded contracts. Moreover, they emphasized that this was a path with no return, i.e., they had to become faithful to the scheme, and whistleblowing was costly and meant betraying the "group" (Figueiredo, 2016).

In this regard, the "group" can be understood as a sector of society that utilizes the public sphere for rent-seeking activities. As pointed by Rangel & Tonon (2017), in Brazilian national culture there is an established notion that the relationship between the public and private sectors is based on influence peddling and exchange of favors between public officials, politicians and businessmen. According to the authors, this dynamic consists in a state that, rather than protecting national interests, serves as a tool for the benefit of few individuals and economic sectors.

In the context of the Operation Car Wash, it was unveiled the existence of a "club" of companies that faked competition for contracts with Petrobras. This group even had a document called "sportive championship" that stated the "rules of the game", and was named as such in an attempt to conceal the corrupt practices. The distribution of contracts was

registered through documents that referred to a bingo and its distribution of prizes. Furthermore, in the realm of Petrobras, directors involved in the scheme stated that there was a limit to how far they could get in their career through merit. After being politically appointed to their management positions in Petrobras, they would always be required to give something in return to politicians (Figueiredo, 2016).

The processes and activities seen in the Car Wash scandal confirmed something that was already known by Brazilians: that kickbacks and bribery practices are the norm in public-private business deals in Brazil (Almeira & Zagaris, 2015). Hence, a cultural context which causes inefficiency in the management of public resources poses a challenge for the efficacy of anti-corruption measures.

In contrast with Brazil, Norway ranks very high on indicators of levels of trust in society. Norwegians show a high level of trust in both their government and in each other (Eriksen & Søreide, 2017). In consonance with these cultural traits, the relationship between the public and private sector is based on working institutions, rather than on influence peddling, bribery and other forms of corruption.

According to Eriksen & Søreide (2017), the high confidence in government institutions in Norway leads to a certain degree of naivety when state-owned enterprises operate abroad. In the context of the Statoil-Horton case, Norwegian citizens and politicians were negligent as they tended to regard the NOC as almost incorruptible, rather than recognizing that Statoil operated in countries with more "corrupt cultures".

While it is true that naivety is far from being the only cause of corruption in the Horton case, and that compliance with the government's policy of zero-tolerance to corruption should be actively pursued, it is also a fact that values embedded in the Norwegian culture had a great role in preventing Statoil to engage in corruption at home, as well as in causing strong reactions after the Horton scandal, followed by policies aimed to preventing reoccurrence (Eriksen & Søreide, 2017).

From these considerations about the particularities of the Operation Car Wash and the Statoil-Horton scandal, it is possible to draw valuable insights. Considering that the state is, ultimately, the enforcer of anti-corruption measures, and that, in Brazil, it is filled with a consolidated culture of rent-seeking, influence peddling and bribery, it is reasonable to assume that the influence of the state in the management of Petrobras should be reduced. Unfortunately, as Rangel & Tonon (2017) suggest, corruption will continue being a distinctive element of Brazilian culture, despite the effort made by certain sectors of society to combat it. A change towards a more independent BOD is vital for Petrobras' recovery,

ensuring less vulnerability to political games and more efficiency in pursuing the interests of the company's major shareholder: the Brazilian citizen.

5.3.1 If national culture is to blame, what can be done?

This study has argued that, in order to understand why Petrobras and Statoil - companies that have been long regarded as reference models for NOC in terms of efficiency, transparency and management - experienced contrasting levels of corruption, national culture must be contemplated as an important variable for causing corruption. Countries who have been colonized for a long period of time - as the case of Brazil - tend to develop a national culture with high levels of power distance, which in turn is responsible for creating unresponsive and unaccountable governments. In these cultures, people - including state officials - are more likely to use power for personal gain. (Pillay & Dorasamy, 2010).

Considering that a causal/contingency link between national culture and corruption poses a big challenge for Petrobras to prevent new corruption cases, and that national culture is a variable that cannot be easily changed, it is appropriate to wonder what can be done.

According to Klitgaard (2017), any policy should take national culture into account without trying to somehow change it. The author points that it is not that cultures do not change, but rather that there are not reliable tools to engineer cultural change. Therefore, the appropriate approach is to investigate what anti-corruption measures can be effective in a given cultural context.

In the case of Statoil, decades of investment in transparency, a bureaucracy with high integrity and a culture that abominates corruption were relatively successful to both prevent grand corruption and ensure the efficacy of anti-corruption policies implemented by the state (McPherson & MacSearraigh, 2007).

In the case of Petrobras, the situation is more delicate. The Operation Car Wash scandal represents the biggest corruption crisis in Brazilian history, and the implications of such crisis are twofold: it brings both opportunities and responsibilities. As Rose-Ackerman (1999) argued, big scandals can serve as catalysts for change. They put corruption on the public agenda and make it obvious that reform is required. In this sense, there is a responsibility to take appropriate measures in order to produce real, effective and long-lasting change.

Often times, the media focus on individuals at the center of the scandal, personifying the case and ignoring the systemic aspects that incentivized corruption in the first place. In this sense, it is vital to emphasize what the root causes of the problem are (Rose-Ackerman, 1999). From a national culture perspective, relationships based on family connections, patronage, clientelism and exchange of favors are the core causes of the corruption case in Petrobras.

When individuals rule the state in order to obtain benefits for themselves and their close associates, reducing public employment and public sector size can be effective in preventing corruption (Smits, 2013). In the case of Petrobras, this includes ensuring an independent BOD, which is more likely to act in the company's best interest and to be held accountable by minority shareholders. Furthermore, measures that limit a bureaucrat's level of discretion to decide on the award of contracts may be effective. In general, policies that reduce the government's involvement in economic affairs and increases the role played by private actors tend to prevent corruption (Sanyal & Samanta, 2002).

To conclude, it must be noted that attempts to fight corruption by limiting discretion and instituting transparent and democratic processes are hindered by corruption-related aspects of the national culture. For that reason, it is particularly important that the judiciary respond strongly to the Operation Car Wash scandal - which is happening in Brazil -, and that an independent media actively work to enforce accountability and provide the population with impartial information. In this regard, Brazil still has a long way ahead before the underlying causes of corruption are addressed. In the meanwhile, searching for policies that are likely to be effective in light of the country's cultural context - rather than reproducing readymade policy formulas - seems to epitomize a good start.

6. CONCLUSION

This thesis attempted to answer the following research question: *given the similarities between both companies, why have Petrobras and Statoil had significantly different experiences with corruption?* In order to do that, a comparative case study was performed based on theoretical and empirical literature. This section presents summarizes the main findings of the research, and suggests directions for further research.

6.1 Main findings

Petrobras and Statoil, although very similar in aspects such as history, institutional framework of oil governance, transparency levels and organizational culture, experienced contrasting levels of corruption. The research conducted in this thesis provided valuable insights for understanding the reason for this.

First, by assuming maximum causal complexity and examining the contingency and contributive role of national culture in corruption, it was argued that anti-corruption policies produce different outcomes depending on the cultural context in which they are implemented. In the same way, national culture influences the efficiency of institutions that would theoretically contribute to prevent corruption.

Second, by evidencing the cultural differences between Norway and Brazil, it was argued that the contrasting levels of corruption in Petrobras and Statoil can be attributed to the political capture of Petrobras. In this context, one aspect of the Petrobras' corporate governance structure, namely the composition of the BOD, appeared as the channel through which this political capture took place.

Third, it was argued that factors such as increasing transparency and implementing a good institutional framework for oil governance can contribute to reduce corruption, however, their efficacy may be limited by a structure of systemic corruption deeply rooted in cultural traits.

Finally, it was suggested that any policy or measure aiming to prevent reoccurrence of corruption in the companies studied should take into consideration the national culture in which they are embedded, and that universal solutions fail to consider this crucial aspect.

6.2 Further research

It is true that speaking of "corrupt cultures" is a delicate endeavor. As Klitgaard (2017) points, even posing the question whether there are cultures more corrupt than others can offend and trigger understandable resistance.

Nevertheless, this is not a valid reason to disregard national culture as a contributive factor in causing corruption. On the contrary, admitting the contingency role of national culture is key in order to be able to design effective anti-corruption policies. In this sense, further research may consider the role of market forces in increasing accountability when the state reveals itself incapable of enforcing anti-corruption measures.

Furthermore, more case studies on that examine the relationship between national culture and corruption are needed to fill the current gap in the literature. Even though we know that - because contexts vary - we cannot simply reproduce successful experiences as a readymade formula, they can provide insights about causal relationships that may assist policymaking. In other words, there is no such thing as cultural fatalism - the idea that a given culture is doomed to be in a corruption trap.

Another interesting topic for research is organizational culture in the public sector (government agencies or even the national parliament) and its possible relationship with corruption levels.

To conclude, it is recommended that future research on corruption investigate the reduction of the influence of the state as a possible way to minimize corruption. In this sense, it is crucial to understand that such hypothesis is not an ideological judgment of value, but rather a recognition that different approaches may be necessary in order to reach similar results in different settings.

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