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Natural Resources and Good Governance: From Curse to Opportunity

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I. Introduction

"All money is a matter of belief" – Adam Smith

This opening quotation attributed to the founding father of modern economics has been widely used as an example of how relative the value of money is. This idea resonates with the much more modern constructivist claim of international politics that argues reality is actually a construct that is collectively created by individuals sharing a common system of belief, which was first outlined by Nicholas Onuf in 1989 (Onuf, 1989). This has influenced the understanding of modern international relations in a much more idealistic fashion than the previous realist and liberalist approaches had even considered, reaching its peak with the seminal work of Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999).

This line of thought has also trascended the field of international relations and has even influenced contemporary economics. The recently published work of economist Ann Pettifor provides an example of how contemporary thinkers still support the argument that wealth is thought to be socially constructed and therefore changeable (Pettifor, 2014). Another example of this is the emergence of bitcoin, a recently created virtual currency whose value is up to a great extent merely agreed upon by its users but which is not backed by any financial or monetary institution.

Natural resources have also been traditionally considered to be one of the main sources of wealth for nations. Even after the abandonment of the gold standard and the subsequent oil crises in the last four decades, oil, gas and mining resources have remained being the focus of major concern for policymakers, academia and economists. This is mainly due to the fact that there has been a socially constructed agreement that the abundance of natural resources is one of the main drivers for growth. Resource exploitation has thus become more widespread across developing nations agreeing to this construction as a way of boosting their economies. However, as this exploitation has become more widespread their consequences for social and environmental standards have gathered much more attention, leading to the formulation of global initiatives for the diffusion of good practices.

This research thus attempts to build on the existing literature on political economy, corporate social responsibility and global value chains in order to provide some insights on the consequences that these international initiatives have beyond the limits of the extractives sector. The scholarly has evidenced the existing links between natural resources, economic

growth and institutional quality but none of the previous studies has delved into the repercussions that compliance with international standards of natural resource management might have on the different dimensions of governance. This is precisely the gap that this research attempts to cover up.

For the purpose of this research the aforementioned opening quote thus shall be understood in a literal manner, meaning that the creation of wealth is actually heavily dependent on the level of commitment that public institutions and other stakeholders show in regard to it. This document provides conclusions that might be interpreted under this perspective by analysing the extractives sector. By conducting this study, my intention is to offer new answers to the traditional questions about development and welfare in resource-rich countries, especially those that are struggling between internal strife and poor state capacity. Despite this, there are some stories of success in which countries have found their way out of poverty and inequality by turning their resource endowments into actual wealth. This has been done primarily thanks to their well-functioning state structures and the engagement with all stakeholders, such as in the cases of Chile in Latin America or Botswana in Africa.

The bigger picture, however, suggests that resource-rich developing countries are usually showing poor performance in terms of economic growth and, more importantly, in terms of institutional quality. However, this research evidences that governments in these countries have the possibility to uphold international standards as a way of improving such performance in the different dimensions of governance. In fact, the results of my study are rather encouraging, thus imbuing policymakers and experts in resource-rich countries with new ideas and policy options to escape the so-called resource curse and to turn resource rents into sustainable and inclusive well-being for their populations. This research evidences that the higher the compliance with international standards of good practices in natural resource management, the better higher the improvement in areas of governance such as control of corruption or regulatory quality. Therefore, if governments and other stakeholders hold the belief that they are able to foster growth, this study provides a tool for them to uphold that belief and turn it into actual development. Moreover, according to the results presented in this document a better performance in terms of human development would also enhance these improvements, providing an additional reason for all stakeholders to engage in a better management of natural resources. As a consequence, the creation of wealth and the promotion of development derived from the exploitation of natural resources is a matter of belief on the side of the stakeholders involved in the extractive industries sector.

For the proper conduction of this research, its structure is divided into different sections. The next part is Section II and contains a review of the most prominent literature in the fields of political economy, corporate social responsibility and global value chains. This would provide a rather complete view of the state of the art and would set the ground for the development of my research. A brief review of the main global initiatives for the diffusion of good practices in natural resource exploitation and management is also provided in order to bridge any eventual gap in the general knowledge that the reader might have in regard to the main focus of this research.

The following section deals with the more concrete theoretical explanations that have been provided by the scholarly to explain the relationship between the compliance with international standards on natural resource management and the governance performance of resource-rich countries. Following these theoretical explanations drawn from different fields of research, I have formulated five hypothesis to test in the development of my project that are also detailed and briefly discussed in Section III.

After outlining the hypotheses that I have formulated, Section IV explains the methodological considerations that I have followed in order to test them. An overview of the different variables under study is also provided, clarifying the essential concepts and dimensions that have been taken into account. In addition, a short explanation of the data collection and the case selection methods is also provided for a better understanding of the background that leads to the analysis of results.

Such analysis is conducted in Section V, in which the different hypotheses are tested. The results of the conducted regressions provide interesting insights that confirm two of the previously formulated hypotheses. Therefore the results provide some valuable information of policy options that statesmen and experts have at their disposal in order to improve governance performance of resource-rich countries, especially in developing ones. This shall not be understood as a final point of the research on the links between international standards of natural resource management and governance, but on the contrary should be understood as a launching pad for further research. Opportunities for such subsequent studies are discussed along with the concluding remarks in Section VI.

II. Literature review

The issue of natural resource management has been prominent in the political economy literature, especially since the post-war period in which resource-rich former colonies started to gain their independence. This caught the attention of scholars and researchers who observed that the abundance of natural resources was not directly linked to economic growth, as it was expected, but had the opposite effect on economic performance. Meanwhile, extractive industries from the developed world were attracted by the business opportunities that these natural resources offered. In the 1990s, this phenomenon triggered concerns about the business conduct of these multinational corporations and their adherence to human rights, social and environmental standards. This compliance was expected to be met throughout the entire value chain with no regard to the number of countries in which the corporation was operating. Once the literature on global value chains and corporate social responsibility of multinational companies acquired relevance, it started to get intertwined with the existing literature on the promotion of international standards and the global initiatives for fostering good practices of management.

The end of the Cold War, the introduction of sustainable development in the global debate of international politics and the rise of commodity prices in the 2000s provoked a substantial incrementation in the volume of research devoted to this topic. Such studies have come mainly from the field of international political economy given the pure economic essence of natural resources and their role in the commodities sector. The aforementioned role of oil, gas and mining resources in the commodities sector has brought them under the spotlight for researchers studying the governance of global commodity chains or the more recent concept of global value chains. This field involves a micro-oriented look at the production chain from suppliers to final products under the lens of corporate social responsibility and corporate governance. Therefore, a short overview of the main findings of this field has also been conducted in order to provide a broader framework for understanding the present research.

Finally, given the fact that one of the main focuses of this study is to analyse compliance with international standards and its effect on the internal institutional structure of states I have also reviewed some of the most relevant studies on this topic. They have evidenced the close links between global initiatives and local administrative reform, blurring national boundaries in many areas, also in natural resource management.

In order to better define the theoretical framework that embraces my research, I will thus first provide a literature review of the political economy on natural resources, as well as a brief

review of the main literature on global value chains and corporate social responsibility. Finally, I have also reviewed the literature on international standards and private authority, especially focusing on the global initiatives for the promotion of good practices in natural resources management.

2.1. Natural resources and economic development: fairytale and curse.

After the third wave of democratisation (Huntington, 1991) the divergent stories of development caught the attention of scholars in the fields of economics, political science and public administration. After the fall of the Soviet Union it was thought that democracy would take precedence over other forms of government, bringing societies to their ultimate point of socioeconomic development (Fukuyama, 1989, 1992). Despite those assumptions, evidence provided a rather different story in which most of those recently democratised countries performed rather unsuccessfully in terms of development.

Some early studies were devoted to shed some light on the factors that triggered such outcome and pointed at natural resource abundance as one of the most likely influences on such a poor performance (Gelb, 1988; Auty, 1990; Berge et al., 1994). In these pioneering works, researchers wondered why countries that had a substantial amount of natural resources –especially oil, gas, minerals and metals- experienced low rates of economic growth. Such puzzle has given birth to one of the most long-lasting and interesting debates in the field of development, economics and institutionalism. Out of this rich exchange of ideas, two main lines of thought have arisen to explain why resource-rich countries do not perform that well in terms of economic growth. The first one is the so-called 'resource curse', while the second is the one based on the concept of Dutch disease.

These two explanations were based on rational choice and economic assumptions and thus enclosed the debate to the field of international economy. Lane and Tornell (1995) attempted to broaden the scope of the debate and provided an explanation based on the field of political economy. Their main argument was that elites in resource-rich countries had more incentives to engage in rent-seeking behavior, given that their main political goal turns out to be the capture of natural resource rents. Rent-seeking is a concept that was born in 1967 as an attempt to better explain the creation of monopolies and the implementation of tariffs to reduce competition by gaining market share and to assess the effects these practices had on welfare systems (Tullock, 1967). The emphasis was put on the lack of institutional checks and balances that would discourage political elites from appropriating these rents for their own private benefit, thus introducing the institutional variable in the debate (Lane and Tornell,

1995; Congleton et al., 2008). This opened a window of opportunity for public administration and good governance scholars to study the management of natural resources. In the following sections the three evolving approaches are outlined to provide a more complete basis for my research.

2.1.1. Dutch disease explanations

The term Dutch disease was not originated in the academic scholarly but has been introduced in the debate due to the usefulness of its explanation. In 1959, The Netherlands discovered large gas reserves in the Groningen province, which was understood as an opportunity for increased economic development in the aftermath of the post-war reconstruction of the country. Exports indeed increased driven by the interest of international investors in what was the largest gas reserve in Europe (Whaley, 2009). However, in the following two decades the Dutch economy experienced clear signs of abatement, with unemployment skyrocketing and corporate investment plummeting. After some studies, experts concluded that the main reason for such experience was that the Dutch currency had appreciated to such an extent that had driven other sectors in the economy to be non-competitive in the global markets. In an attempt to counter these harmful effects, the Dutch government tried to keep interest rates low to avoid the further appreciation of the currency, which in turn pushed investors out of the country and therefore trumping potential future economic growth. After such experience, The Economist coined the term 'Dutch disease' to describe the effect that natural resources could have on national economies (The Economist, 2014).

Already during these decades some scholars had warned against the effects that natural resources could have on other economic sectors via linkages (Hirschman, 1958; Seers, 1964; Baldwin, 1966) and were joined by Paul Krugman in the late 1980s (Krugman, 1987). Matsuyama (1992) traced these linkages between agricultural and industrial sectors and examined how agriculture detrayed resources away from manufacturing activities, thus hindering economic growth. This evidences that Dutch disease models can not only be present when oil, gas or mineral resources are involved, but rather when a more general non-tradable commodity such as hydrocarbons, forestry or crops has a sink effect on manufacturing. Sachs and Warner (1995) built upon these experiences to study the effect of natural resources on economic development, conducting a large-N research of resource-rich countries and analysing their growth rates. Their cross-country analysis provided findings that supported Dutch disease explanations for resource-rich countries in the period ranging from 1970s to

1990s, thus reinforcing the views that there was a detrimental linkage between natural resources and economic growth. Dutch disease explanations, although accurate, appeared to be incomplete for providing a comprehensive explanation to the factors leading to poor economic performance of resource-rich countries. This led scholars to formulate the next step in the research on the links between natural resources and economic growth.

2.1.2. Resource curse

The seminal work of Sachs and Warner opened a new understanding of the role of natural resources in the development of national economies of resource-rich countries. After the study conducted by these two economists, many others decided to devote their research to the linkages between natural resources and growth. Already in 1988, Alan Gelb had coined the term 'resource curse' to conceptualise this harmful influence of oil resources on the economic performance of some oil-producing countries (Gelb, 1988). In 1993, Richard Auty built upon that concept in order to assess whether mineral resources were also part of the so-called curse and his findings confirmed that minerals and metals had a similar effect than that studied by Gelb in oil-rich countries (Auty, 1993). Therefore, the curse had spread to other non-renewable natural resources.

In most of the research studies that were conducted during the 1990s, authors showed significant agreement on explaining the resource curse. For them, natural resources had a 'crowding-out' effect on other economic activities that were driving forces for growth (Sachs and Warner, 2001; Sala-i-Martin and Subramanian, 2003). Despite this common ground, the different scholars did not agree on what kind of activities were those that led to growth. For Sachs and Warner (1995, 1999) growth was attributable to manufacturing activities that were deprived from resources due to the rise in prices for commodities that is derived from natural resources exploitation. On the other hand, there were some scholars that considered entrepreneurship as the main driver for growth. In their view natural resources would crowd-out innovation and entrepreneurship if the natural resource sector offered higher wages that could employ potential entrepreneurs (Gylfasson et al, 1999; Gylfasson, 2001). This in turn would trump growth in a similar way it was supposed to do with manufacturing activities.

Despite the growing consensus on the resource curse and on the depriving and crowding-out effects of resource intensity on economic growth, there were some authors that decided to revise the assumptions of the Dutch disease and resource curse explanations. These authors acknowledged the negative relationship between natural resource endowments and economic growth but avoided providing solely economic explanations. For example, Brunnschweiler and

Bulte (2008) argued that the resource curse thesis was actually a red herring to cover up for a flawed institutional framework. On the other hand, Collier (2008, 2010) provided some alternative explanations that stick to the purely economic explanation by pointing at the commodity price flows in international markets as drivers for poor economic growth in resource-rich countries.

Despite these critiques and alternative arguments the resource curse provided a broader explanation which was also more prone to generalization to the vast majority of resource-rich countries. Despite this, the resource curse theory has also failed to completely explain why abundance of natural resources has a detrimental effect on development in some countries why others appear to escape from the supposed curse. For this reason, a last development was made in this line of thought that introduced the institutional variable in the equation.

2.1.3. Institutional factors

As the resource curse was becoming more and more popular for explaining the effect of natural resources on economic development, scholars started to wonder why some resource-rich countries managed to show better performance in development terms such as Norway, Canada, Chile or even Botswana. The fact that some cases escaped the resource curse watered down the prospects of the explanation to become an actual curse rather than the result of a set of more circumstantial factors.

Parente and Prescott already warned in 1994 that the cross-country estimates of economic growth suffered from an important bias given the fact that they omitted many variables that fall out of reach of purely economic considerations (Parente and Prescott, 1994). One of these variables was thought to be the degree of institutional quality. Institutions could be understood as the rules of the game to which economic actors abide in order to foster growth and development (Brunnschweiler and Bulte, 2008). In this regard, Persson and Tabellini (2003) already observed that the differences in the constitutional design of countries had an effect on the success of their economic policies. Mehlum et al. (2006) went further and marked a turning point in the literature on the resource curse by finding direct evidence between poor quality of institutions and adverse effects of resource rents on economic growth. Arezki and van der Ploeg (2010) argued that the economic resource curse was less severe in countries with better institutions and took the research on the effect of institutions on natural resources to its fullest. They showed evidence of the harmful impact of natural resource abundance of a country on its prospects for growth but also confirmed the hypothesis that resource-rich countries with working institutions and economic openness were

capable of coping with the resource curse more easily than closed economies with worse institutional performance.

Rodrik et al. (2004) did an early contribution to introduce the institutional variable as essential for studying economic development, serving also as a basis for the studies of Mehlum et al. (2005) and Boschini et al. (2007). They all concluded that institutions were the key variable that made some resource-rich countries such as Norway or Canada to perform better than others that had fallen trapped by the resource curse such as Nigeria (Sala-i-Martin and Subramanian, 2003). Such evidence was further reinforced with the study of Acemoglu et al. (2003) on the economic success of Botswana in the context of African resource-rich countries. The authors argued that despite the low literacy rates and significant problems with infrastructure, Botswana was able to make the most out of its diamonds by virtue of its functioning institutional framework, becoming one of the economies with a higher GDP per capita in Africa. This study was built upon Acemoglu et al. (2001) and was further developed in Acemoglu and Robinson (2012) to underpin a more general theoretical assumption that would distinguish between inclusive –or good- institutions and extractive –or bad- ones, depending on the motivation they had for allocating rents: for the public good or for private benefit respectively.

After these findings showing that institutions were essential for economic development, there was a rather significant rush to follow the 'stories of success' in other countries that were experiencing problems with what Acemoglu and his colleagues had labeled as extractive institutions. Corruption had been trumping development of African countries and was identified as one of the major hindrances for economic growth (Leite & Weidmann, 1999; Humphreys et al, 2007; Kolstad and Søreide, 2007). The work of Acemoglu et al. pointed at the institutional design of these countries as the responsible for creating such incentives for corruption, so the Bretton Woods institutions started to promote a given set of reforms for all countries striving for their financial help, what was later called conditionality (Goldstein, 2001; Santiso, 2001, 2004).

Despite the effort made by international financial institutions (IFIs) to foster this set of reforms that were supposed to trigger economic growth (Dollar and Svensson, 1998), the countries kept performing deficiently in terms of governance and they even got more indebted with creditors due to the inability to repay the loans, entering in default (Koeberle et al., 2005; Woods, 2006). This experience opened a debate on the adequacy of conditionality and

scholars pushed for the revision of the concept both in terms of results and in terms of procedures (Woods and Narlikar, 2001; Santiso, 2004; Koeberle et al., 2005).

After such debate, a new consensus has emerged on the necessity to avoid one-size-fits-all reforms and instead develop tailored solutions taking into account specific political, social and economic characteristics of the country involved (Acemoglu, 2008; Rodrik, 2008). This line of thought is still evolving and has to overcome many difficulties derived from technical-oriented bureaucracies in the international financial institutions (Woods, 2006). Nevertheless, it seems rather certain that the consensus on the vital importance of institutional reform and good governance is here to stay, now pushing donors to undergone reforms of their criteria for loan concessions or for the provision of overseas development aid (ODA) (Gulrajani, 2015).

This direct relationship between institutions and economic development and the transformation of the role of international financial institutions is also affecting natural resource management. In recent years, there have been several important steps in the International Monetary Fund and the World Bank in order to provide guidance to resource-rich countries on how to better manage their natural resources and escape the curse. Most of these initiatives have dealt with institutional reform in order to better channel resource rents and to implement checks and balances to prevent corrupt behavior of policymakers and elites.

Nowadays, this explanation has managed to build a consensus among the scholarship on the importance of institutions for a better transformation of natural resources into actual development. Despite this, there are still unanswered questions in regard to such a relevant topic: what drives some countries to adopt better institutions than others? Does local adaptation deserve primacy over generic standards of good institutions? What actors should be involved in the process of institutional reform? The latter question has been essential for the design of structural plans of reform, especially those formulated by the international financial institutions. Private companies play a key role in the exploitation of natural resources and therefore their actions have been scrutinized to assess their adherence to the social, environmental and human rights standards that institutional reform also upholds. Then it is when the literature on global value chains and corporate social responsibility becomes relevant for my research.

2.2. Global value chains: the role of multinational corporations in good governance

The Westphalian system had established the nation-state as the primary actor for the conduction of international relations. However, already since its birth this assumption has

been challenged by a multiplicity of actors that have engaged in relations between them beyond the borders of a State. Along with the process of globalisation and the spread of capitalism at the international scale, companies have had more instruments within their reach in order to 'go global' and operate in different countries. This phenomenon has been exacerbated in the last decades showing a rise in what has been called 'private authority' (Cutler et al., 1999; Hall and Bierstecker, 2002; Buthe 2004).

The very notion of governance implies trascending the role of the nation-state in world politics to encompass the activities of other actors and a much wider range of activities and relationships that these actors can have among them and also with governments of the nation-state (Rosenau, 1995). However, governance can also be understood as "the process whereby an organisation or society steers itself and the dynamics of communication and control that are central to that process" (Rosell, 1992). It is this definition of the concept the one that suits better the object of study in this part of the review, as once companies establish their subsidiaries or rely on suppliers offshore, the coherence and good practices of the entire process are vital for the final product.

The extractives sector is characterised by the divergence between resource-rich countries that usually lack the technology and funds to exploit them and turn them into rents and companies that have the means and know-how for doing it but whose origin is rooted in developed countries. This creates an imbalance between governments that are entitled to award exploration and exploitation rights and the companies seeking those awards (Cottarelli, 2012). This is not only detrimental for local governments that suffer from this asymmetric information, but also for companies that have to take the risk of operating overseas. A substantial part of this risk entails relationships with locals and, more accurately, what has been called the 'social license to operate' or SLO (Prno, 2013).

The concept was coined in the 1990s by Jim Cooney, a Canadian mining executive, in order to refer to the need for mining companies to achieve acceptance from local communities in which they operate. However, SLO does not refer merely to the projects these companies conduct but also to their sole presence in the area where they are going to operate. Since then, the concept has been evolving and has attracted more attention from the media, activists and also academia (Gunninham et al., 2004; Nelsen, 2006; Prno, 2013; Kagan et al., 2014). Therefore, extractive companies have engaged in a process of commitment with the local population that resonates with the requirements of good governance and economic development.

So far, the primary way for multinational corporations to earn this license has been the development of corporate social responsibility (CSR) activities. As global capitalism made it easier for companies to operate overseas due to lower production and labor costs in developing countries (Utting, 2005; Tokatli et al., 2008) there was also a rise in the concerns about the social and environmental conditions in which these companies conducted their business (Seidman, 2007). The notion of corporate social responsibility thus emerged as a way to recognise "(a) that companies have a responsibility for their impact on society and the natural environment; (b) that they have a responsibility for the behavior of others with whom they do business; and (c) that business needs to manage its relationship with wider society, whether for reasons of commercial viability or to add value to society" (Lund-Thomsen and Lindgren, 2014).

The idea of corporate social responsibility therefore is more directed to the concerns with how the multinational company operating offshore is embedded in the home society. The scholarly debate on CSR has highlighted not only the moral argument for companies to be more respectful with the environment and to provide higher labor standards to their employees but also the economic argument of it being profitable (Knox and Maklan, 2004). These alleged benefits have also been essential for bringing more companies to comply with human rights and environmental preservation, given that CSR is a voluntary process. In the extractives sector there is an increasing number of companies joining Voluntary Principles on Security and Human Rights or the comprehensive United Nations Global Compact (Smith, 2014). This is particularly important in resource-rich developing countries in which national laws cannot guarantee minimum safety, labor and environmental standards (Acka-Baidoo, 2012; Hilson, 2012).

Corporate social responsibility has recently been complemented by other notion: global value chains. This concept emerged from the debate on commodity chains opened by Hopkins and Wallerstein (1986) who defined these chains as "networks of labor and production processes whose end result is a finished commodity" (Bair, 2009). The aforementioned trend of delocalising business has attracted the attention of scholars that wanted to do more research on these processes of activities that add value to the production process (Cattaneo et al., 2013). These chains also need to have a governance structure to ensure that social and environmental standards are respected throughout the whole production process from suppliers to final outcomes. Gereffi distinguished different models of governance for global value chains: hierarchical and market-based chains (Gereffi, 1994, 1995; Gereffi et al., 2005).

The hierarchical model was built upon the idea that lead firms from developed countries are the ones driving global value chains. Therefore, retailers in North America and Europe would exert power through top-down hierarchical channels to their suppliers in developing countries. This model therefore assumes that NGOs, trade unions and mass media can exert sufficient pressure on retailers from developed countries in order to make them abide to social and environmental standards through naming and shaming and boycott campaigns (Locke et al., 2009). Given their leading role in the global value chains, these retailers would in turn force their suppliers to comply with the same standards thus ensuring that the whole chain is consistent. The market-based compliance model, on the other hand, would be a slightly modified version of the hierarchical model in which the demands of buyers are what drive the incentives of the suppliers to comply with the aforementioned standards. However, it has been evidenced that sometimes the demands of buyers are contradictory –for example, demanding retailers to guarantee labor rights while, at the same time, demanding low prices- and this makes it harder for companies to fully deliver to the expectations in terms of corporate social responsibility and governance of global value chains (Barrientos, 2013).

This has been the rationale behind most campaigns in corporate social responsibility and global value chains. However, some critiques have arisen on the suitability of the compliance-based model –either hierarchical or market-based- to the 21st Century (Bair, 2009: Lund-Thomsen et al., 2012). Therefore, there have been several attempts to outline new models that would overcome the limitations of the top-down compliance models and to present much more cooperative ways in which global value chains can be governed (Locke et al., 2009; Gereffi et al., 2005; Gereffi and Lee, 2016).

These cooperative models would be based in the concept of multistakeholder initiatives in which "NGOs, multilateral and other organisations encourage companies to participate in schemes that set social and environmental standards, monitor compliance, promote social and environmental reporting and auditing, certifying good practice, and encourage stakeholder dialogue and social learning" (Utting, 2002). Therefore, there have been initiatives that have tried to get all stakeholders engaged in the process of governing global value chains for promoting ethical trade and production processes. Auditing and reporting thus turn into essential aspects of this governance. The alternative model of cooperation tries to avoid top-down directional channels and as a consequence suppliers are much more under the spotlight in these models by the creation of local content requirements (LCRs) (Locke et al., 2009).

Local content requirements can be defined as “policy tools used by governments to generate economic benefits for the local economy beyond fiscal benefits” (Ramdoo, 2015). This is particularly important in the extractives sector, given the tremendous impact that extractive operations have on the local population and the risks of downplaying the role that locals may play in the development of exploitation projects. However, in order to get locals engaged in a responsible way they have to receive training on their legal rights as workers, indigenous peoples or even as women and children, making them get familiar with codes of conduct. This is what has been called ‘social upgrading’ (Lund-Thomsen and Coe, 2013).

Therefore the engagement of multinational corporations with local content has been evolving since the early developments of modern globalization. First, companies designed corporate social responsibility strategies to clear their public image towards consumers, claiming they were respectful with human rights and environmental concerns. With an increasing delocalization of business this engagement was taken offshore, turning into what has been labelled as commodity chains or global value chains and attracting the body of literature presented hereby. Nevertheless, although cooperation of private corporations has become essential and it is indeed growing there is still a long way to run in terms of creation of local content. There are significant gaps in the literature in regard to what makes this engagement fruitful or the factors that lead to compliance with standards. Despite this, the literature on global value chains and corporate responsibility provides a valuable ground for understanding the reforms in natural resource management and the drive towards good governance. The next section of this research provides some insights on the formulation of the standards to which corporations have to abide, paying specific attention to the extractive industries sector.

2.3. International standards for natural resource governance

Most of the global initiatives and international standards that have been proposed for the management of natural resources take these cooperative models as an inspiration for their mission. For example, the Extractive Industries Transparency Initiative (EITI) encourages companies to report the amount of taxes they pay to national governments of the countries in which they operate. On the other hand, the multistakeholder character of the initiative also means that governments are encouraged as well to publish the revenues they receive from natural resource exploitation. These reports are publicly available and empower citizens to audit and hold their governments accountable for the sustainable use of their resources (Haufler, 2010). EITI provides a set of requirements participant countries have to meet in order to comply with the EITI Standard, working with multinational corporations, governments, civil

society, international investors and other organisations to foster a more transparent management of natural resources.

The International Monetary Fund also got engaged in promoting the sustainable and transparent exploitation of natural resources, especially since there is a substantial number of developing countries that are also considered as resource-rich. The IMF thus decided to publish its Guide on Resource Revenue Transparency in 2005 to make governments, companies and civil society aware of the opportunities that natural resources may bring for economic development. The Guide was mainly drafted for oil resources and was significantly directed to upholding the clarity of roles that the different stakeholders should play throughout the whole value chain of natural resources. The main highlight was on transparency of fiscal revenues, building upon the Code of Good Practices on Fiscal Transparency that the International Monetary Fund had already put together but also taking into consideration the specifities of the extractives sector. The Guide was updated in 2007 and served as a basis for the ellaboration of the Resource Governance Index that is underpinning this study.

The World Bank Group has also entered the field of natural resources by launching a comprehensive strategy on extractive industries. The strategy is based upon three pillars: Governance and Domestic Resource Mobilization; Inclusive Growth, Jobs and Infrastructure; and Environmental and Social Sustainability. The Group has conducted numerous projects under the umbrella of this strategy in order to foster the sustainable exploitation of resources in developing countries by respecting the environmental conditions of areas where resources are located, by creating local content and by promoting economic growth. The World Bank Group has also launched the Extractive Industries Sourcebook along with the Centre for Energy, Petroleum and Mineral Law and Policy from the University of Dundee. This Sourcebook reviews the entire value chain since the exploration until the very last allocation of resource rents. These guidelines are attempted to orient policymakers and other stakeholders in promoting the sustainable development of resources through a much broader than that of mere fiscal transparency, but also stressing the importance of contracts, resource revenues use and the inclusion of other forms of resource exploitation such as artisanal mining.

These initiatives launched by the International Financial Institutions (IFIs) are still underway and therefore their results are constantly being evaluated. Some of the critiques point at the bias that the IMF has in terms of providing guidance to countries, considering only those that have lending programs ongoing while not being substantially successful in the promotion of

public disclosure of contracts in the extractive industries sector (Bank Information Center and Global Witness, 2008). On the other hand, the World Bank has relied more on the EITI in order to uphold transparency of contracts but fails to meet the desired level of revenue transparency and of civil society engagement (Ibid.). Despite this, it should be noted that the fact that major international institutions such as the IMF and the World Bank engage in natural resource governance is an opportunity for resource-rich countries to receive more assistance in turning those resources into actual well-being for their population.

This is not, however, an exhaustive list of all existing global initiatives for a better management of natural resources. For example, there has been a growing concern on the activities of armed groups that use natural resources in order to get funding, leading to the creation of important projects for haltening the trade of conflict diamonds in the international markets such as the Kimberley Process Certification Scheme (KPCS) –an initiative from African diamond-producing countries- or the OCDE Due Diligence Guideline for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, launched by developed economies to act on the demand side of the chain. Even if they do not impose legal obligations on stakeholders, they have managed to foster transparency in the entire mineral value chain from miners to final products (Dam-de Jong, 2015). Nevertheless, there is significant room for improvement, as there are still many flaws that need to be addressed and many gaps that require specific attention such as the difficulties of data collection, the actual allocation of resource revenues or the system of sanctions and rewards for countries that fail or succeed in complying with the international standards of natural resource governance (Mejías Acosta, 2010).

The existence of various different standards sends a clear message that a traditionally nation-based sector such as natural resource exploitation has been increasingly transnationalized. This is particularly due to the economic links between multinational corporations that possess the know-how of resource exploitation and developing countries that possess the actual resources. However, this proliferation of global initiatives also risks the fragmentation of good practices. For example, there are different classifications of resource-rich countries and therefore studies whose conclusions serve as recommendations for natural resource management are focused on different sets of countries. At the same time this fragmentation also creates uncertainty on the side of policymakers and local actors in target countries at the time of implementing the desired and recommended reforms.

These three bodies of literature thus come together for the research on natural resources and good governance. The political economy set the ground by outlining the causal mechanisms

between natural resources abundance and economic growth and introduced the institutional variable that is vital for my research. Natural resource exploitation generates a substantial flow of rents that is supposed to broaden the options of statesmen for promoting development and redistributing wealth among their population. However, literature provides evidence that neither of those outcomes are present on a general basis in resource-rich countries, mainly due to a poor performance of institutions to channels those funds efficiently.

On the other hand, the literature on global value chains provides keys for the assessment of the role of private corporations, who play an essential part in the implementation of good practices in natural resource governance. Finally, the literature on international standards and the different initiatives that have been formulated so far provide a basic understanding of the state of the art. My research attempts to build on these works in order to better understand the links between natural resource abundance and good governance –the institutional variable of the political economy theories that now comes to the forefront of the research-, in which international standards of transparency and local content are essential.

The aforementioned review shows the evolution of the literature on natural resources from the perspective of political economy and how resource exploitation interacts with economic growth and institutions. This body of literature is also complemented by the literature on global value chains and the role of corporations in the process of turning natural resources into development in a sustainable way. Finally, the literature on international standards and the global initiatives for natural resource governance provides a valuable overview of the way these standards are formulated and implemented. However, there is still a gap in the literature when it comes to the intersection of the three lines of thought and the bi-directional relation between natural resources and governance performance.

III. Theoretical framework and hypotheses

The increasing number of studies that deal with the role of natural resources in the path to economic growth evidences the relevance of this sector for the wealth of national economies. The revenues that natural resources generate provide governments with a significant room for maneuvre in terms of public expenditure and investment. However, it has been observed that most resource-rich countries fail to generate long-term sustainable welfare for their populations and instead fall victims of pervasive institutional dynamics that trump their economic development.

Beside that, natural resources –especially those that are non-renewable such as oil, gas and mining resources, the ones that are object to study in this research- are finite and therefore subject to depletion. In such a scenario of scarcity, the good governance of these assets acquires even more relevance not only at the national level but also at the local and global ones. The globalization process has fostered the internationalization of extractive industries that operate in countries different from the ones they come from and this also raises questions on how to deal with locals. Good governance thus implies not only the better management of resources in terms of allocation of extraction rights or the use of resource rents, but also the respect for social and environmental standards and the creation of local content in the home country. This phenomenon has also triggered the emergence of a body of literature on the way multinational corporations engage with the social and environmental dimensions of the areas in which they operate. Corporate social responsibility is now studied along the entire value chains that go from the supply side of the production process to the very last value-added product resulting from those chains. Therefore, the good governance of global value chains has also attracted much attention from scholars and policymakers for ensuring that minimum international standards and basic human rights are respected.

Despite the vast amount of literature on the effect of natural resources there is little research on how a better management of natural resources can have an impact on other areas of governance in resource-rich countries. As mentioned before, there has been an evidenced link between resource dependence and poor economic growth and a consensus has arisen in regard to the relevance of institutions as intermediate factor to make the difference between success or failure in terms of development. Nevertheless, there has been little attention to the link between natural resource management and the institutional factor itself. This led me to formulate the following research question:

What is the impact of compliance with international standards of natural resources governance on the overall governance performance of resource-rich countries?

In order to provide an answer to this question I have conducted a quantitative research to assess the relationship between the compliance with international standards of natural resource governance measured by the Resource Governance Index and the more comprehensive Worldwide Governance Indicators that measure several dimensions of governance of countries. According to the Natural Resource Governance Institute, the institution behind the Index, natural resource governance is hard to measure, but they rely on prominent global initiatives such as the Guide on Resource Revenue Transparency released by the International Monetary Fund and the Extractive Industries Transparency Initiative (EITI) in order to construct their index.

According to the literature, there is a causal link between natural resources and economic growth. Given the fact that institutions play an essential role in this causal link, it would be expected that there is a similarly close relationship between natural resources and institutions. This led me to formulate the following hypothesis:

H1: *The compliance with international standards of natural resource governance has a positive impact on the governance performance of resource-rich countries*.

This hypothesis is based in the notion of spillover effect. For the purpose of this research, a spillover effect will be understood as the impact that institutional reforms in one area or sector of economic activity might have on the rest of the institutional framework of the country. In this case, the sector under consideration is the non-renewable natural resources sector: oil, gas, minerals and metals. In order to assess whether there is a relationship between natural resources and institutions, I have observed the interaction between the compliance with natural resource management standards and the overall performance of resource-rich countries in the Worldwide Governance Indicators. According to the aforementioned hypothesis, a better adherence to natural resource management standards would have a spillover effect in other areas of governance, therefore showing better performance in the Worldwide Governance Indicators.

The confirmation of this hypothesis may be considered as not too surprising, given the fact that the improvement in areas that enhance transparency such as publishing of contracts and payments could easily lead to improvements in accountability or corruption. Despite this, it is still valuable to test it because maybe there might be inefficiencies in the state structures of

resource-rich countries that prevent those improvements to spill over other areas of governance. On the other hand, it could also be the case that there are states whose institutional structures are more interconnected and therefore witness a stronger link between both sides of the argument. Therefore it should not be taken for granted that a higher level of transparency is going to provoke a direct increase in the quality of institutions *per se*. This is one of the main reasons why testing the aforementioned hypothesis is of special relevance.

Nevertheless, it is possible that this impact is not straight-forward, but moderated by a set of variables that may amplify or cushion this positive effect. For example, the literature on the resource curse suggests that the more natural resources a country has, the worse its economic performance is expected to be (Sachs and Warner, 1995, 2001; Sala-i-Martin and Subramanian, 2003). This would suggest that countries with a higher rate of natural resource exploitation are more prone to experience the curse. However, some other studies argued that it was not resource abundance what triggered the resource curse but rather resource dependence (Brunnschweiler, 2008; Brunnschweiler and Bulte, 2008). This would suggest that instead of taking into account the rate of exploitation, the best proxy for the effect of natural resources on economic growth is measuring the share of resource rents in the overall government revenues of a country. Therefore, it could be expected that resource dependence has a similar effect on governance, leading to the formulation of the next hypothesis:

H2: *A higher degree of resource dependence has a detrimental impact on the relationship between natural resources governance and overall governance performance of resource-rich countries*.

If evidence supports this hypothesis it could be a sign that the resource curse that scholars in the field of political economy theorise is also present in the institutional realm. Resource dependence was proven to be detrimental for economic growth by some studies and such effect could now be seen also on governance indicators making the curse even more worrying than expected. On the other hand if this hypothesis is proven wrong this would mean that a variable that had a significant harmful effect on economic growth is however not relevant for institutional quality and governance, opening a window of opportunity for resource-rich countries for reforming their institutions.

According to the resource curse literature, institutions and development are closely related (Acemoglu et al, 2001, 2003; Arezki and van der Ploeg, 2010). In fact, the institutional explanation that scholars of the resource curse had applied to economic growth proved to be

also valid for the impact in development. This high correlation between human development and institutions poses another challenge to the impact between natural resource management and overall governance performance. If institutions are essential to transform natural resource wealth into actual economic development, it could be expected that the level of human development is a proxy for better institutions. Given the close link between human development and institutions, it could be expected that a higher level of human development in resource-rich countries is a sign that institutions work better and therefore it is easier that natural resource management has an impact on overall governance. Taking this into account I have formulated the following hypothesis:

H3: *A higher level of human development has an amplifying impact on the relationship between natural resources governance and overall governance performance of resource-rich countries*.

The confirmation of this hypothesis would support the view that human development has a positive impact on institutions and therefore would also back the argument that human development and institutional quality are self-reinforcing. This would also bestow the benefitial effects of human development with even more empirically-based evidence that would confirm the essential role human development plays in the functioning of states. On the contrary, if this hypothesis is proven wrong this could be the starting point of a debate on the actual effect of human development on governance indicators when paired with inferences coming from sectors of economic activity such as the extractives sector.

Building on the literature on global value chains and corporate social responsibility it can be concluded that engagement of companies with development and international standards has been constantly increasing (Seidman, 2007; Lund-Thomsen and Lindgren, 2014). However, the literature in this regard refers mostly to private multinational corporations from developed countries operating in developing nations with a vast amount of natural resources. Nevertheless, when natural resources are discovered, national governments in resource-rich countries may decide not to fully resort to multinational foreign corporations to exploit these resources but rather to create nationally-owned companies that could enhance governmental oversight. Taking this into account, there is a substantial body of literature on the relations between policymakers and bureaucrats that work in state-owned enterprises. Most researchers agree on the assumption that politicians appoint bureaucrats that are closer to their own political preferences in an attempt to minimize the gap between principal –politicians- and agents –bureaucrats- (Anastasopoulos, 1985; Cohen, 1986; Wood and

Marchbanks, 2008; Enser-Jedenastik, 2014). However, this usually triggers an opposite reaction from bureaucrats working in these state-owned enterprises, who want to defend their autonomy (Enser-Jedenastik, 2014). Therefore, bureaucracies in state-owned enterprises might become an obstacle for the aformementioned spillover effect that would otherwise be non-existent. This led me to the formulation of the following hypothesis:

H4: *The presence of a state-owned enterprise in the extractives sector has a detrimental impact on the relationship between natural resources governance and overall governance performance of resource-rich countries.*

Following the same logic, governments sometimes decide to create natural resource funds to enhance national ownership of natural resources. According to the Natural Resources Governance Institute these funds are created in order to cover for budget deficits of national accounts or with saving purposes for the time when natural resources are depleted using the resource revenues that present exploitation generates. Natural resource funds are becoming more popular as an instrument for long-term planning strategies of resource exploitation but there is still a lack of a specific literature on them, especially for the purposes of this research. Nevertheless, they are created with a similar purpose to that of state-owned enterprises and they entail the creation of another institution that is closely linked to the government but, at the same time, which is intended to have autonomy in its investment decisions. This nature resembles to that of state-owned enterprises, leading me to the formulation of the following hypothesis:

H5: *The presence of a natural resource fund has a detrimental impact on the reslationship between natural resources governance and overall governance performance of resource-rich countries.*

By testing these two latter hypotheses, I will provide a modest contribution to the literature on the relations between policymakers and bureaucrats and whether the tensions between them are successfully solved. If these hypotheses are proven true, they could be treated as a proxy of a bureaucracy that has managed to escape political control in order to make their own decisions within their range of action. If state-owned enterprises or natural resource funds have a detrimental effect on the impact between natural resource governance and other areas of governance this would mean that bureaucrats enjoy a significant level of authority in order to take decisions that affect the otherwise more positive relationship between the variables. On the other hand, if they are proven wrong this could mean that the bureaucracies of state-owned enterprises and natural resource funds are not autonomous enough to take decisions

that could jeopardise the relationship between natural resource management and governance indicators.

By providing an answer to my research question and testing my hypotheses I attempt to shed some light on the links between natural resource exploitation and management and the governance performance of resource-rich countries. The aforementioned hypotheses do not only build on the existing literature but also try to go beyond the state of the art by offering a much broader scope into natural resource management and good governance.

IV. Methodology

The literature review has therefore provided a starting point for this research given the fact that there is a gap in the interaction between natural resource management, governance indicators and the role of extractive industries in the governance performance of resource-rich countries. This literature review has, at the same time, provided some theoretical explanations and insights that have been valuable in order to construct the different hypotheses that I have outlined in the previous section of this document. The next step is thus the presentation of the methodology that I have used in order to conduct this study. In this section, first of all I am going to provide a description of the main concepts and variables that I have used in this research. After that I will explain the process of data collection and I have added any necessary remarks that needed to be made in this regard. Finally, I will briefly describe the research methods that I have used in order to assess the interaction between my variables.

4.1. Research design, concepts and variables

In order to provide an answer to my research question and to test my hypothesis I conducted an experimental quantitative research design. Quantitative methods provide an accurate and well-fitted manner of building models for social science research in which causality is portrayed in probabilistic terms (Goetz & Mahoney, 2012). Following this understanding, Suppes (1970) argued that "one event is the cause of another if the appearance of the first event is followed with a high probability by the appearance of the second". However, this perspective has evolved in order to highlight the relevance of counterfactual explanations in the causality of events in social science (Morgan & Winship, 2007). In this research, the main goal is to draw inferences from cross-case analysis and therefore these quantitative research logics better suit my study (Goetz & Mahoney, 2012; Bryman, 2008).

The data collected responded to the independent variable and the different interaction effects that have an influence on the variation of my dependent variable. In order to provide a more comprehensive and detailed information on the data collection, the variables under research need to be outlined. First, I will list the concepts and dimensions that have been taken into account and how they have been operationalized into variables. The first ones to be considered are the concepts that make up my dependent variable, overall governance performance. Following that I will provide the necessary insights on my independent variable to better explain what compliance with international standards in natural resource management or natural resource governance are. Once this is clear, I will proceed to outline

the different conditioning variables that make up the interaction effects that I have hypothesized on in the previous section of this document.

4.1.1. Dependent variable: Worldwide Governance Indicators

The first important concept of my research is *overall governance performance*. Governance as such is hard to measure effectively and therefore the definition of the concept is extremely important for the conduction of a working and understandable research. For the purpose of this study, governance will be defined following Kaufmann et al. (2010), consisting in several but self-sustaining dimensions that make up the "traditions and institutions by which authority in a country is exercised" and considers "(a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them" (Kaufmann et al., 2011).

However, this definition is still too vague to be measured in pragmatic terms. In order to bridge this divide between theory and practice, the World Bank Group promoted the creation of several indicators that account for the aforementioned dimensions of governance: the Worldwide Governance Indicators. Out of these different areas, the Worldwide Governance Indicators identify six variables to measure in order to assess the performance of countries in this field. The variables Voice and Accountability and Political Stability and Absence of Violence/Terrorism deal with the dimension of citizen participation, freedom of expression, stability of governments and the threat of violence to overthrown regimes. The variables Government Effectiveness and Regulatory Quality are an approximation to the quality of government services and the degree to which institutions and civil service are resistent to political pressure and able to formulate and effectively implement sound policies. Finally, the variables Rule of Law and Control of Corruption refer to the extent up to which actors abide by the set rules especially in regard to private property and law enforcement and the extent to which public officials use their power of position in order to satisfy private needs.

In order to provide measurement for all those variables, the Worldwide Governance Indicators rely on perception surveys conducted by experts in which the subjects were households and experts in the countries under study. This is preferred due to the lack of objective data in order to assess some of the variables –mainly corruption- and due to the importance of not just assessing the governance performance on paper but also to assess the actual *de facto* implementation of enacted laws and regulations (Hallward-Driemeier et al., 2010). The different sources of perceptions are recoded in the Worldwide Governance Indicators in order

to facilitate cross-country comparisons and comparisons across time. This facilitates further research that could use the Worldwide Governance Indicators as observable variables. For these reasons, this research has considered the Indicators as the best measurement for the overall governance performance of countries and therefore has used them as dependent variables. These Indicators are so far the better measurement tool for governance that researchers can rely upon. Despite several critiques (Arndt and Oman, 2006; Knack, 2006; Thomas, 2006) the Worldwide Governance Indicators provide the most complete and deepest analysis of the different areas of governance. The aggregate measurement of these areas by using the most prominent studies as source provides a broader image of the actual governance performance of countries and therefore are the best way of measuring the dependent variable of this research.

On the other hand, the scores for each of the Worldwide Governance Indicators have been recoded following a similar scale from 0 to 1 in which 1 stands for the highest score. This would permit a better understanding of the results, as well as providing a common ground for all variables to be compared. However, the complexity of this study is enhanced when we consider that the dependent variable is at the same time composed by many different dimensions. In order to facilitate the explanation of my research I will take one of this dimensions as the primary analysis while the others are secondary analyses to check the robustness of the relationship between both variables. The selection of this dimension will be done on the basis of the significance of their correlation with the independent variable and by no means this shall be understand as the existence of any hierarchy between the different dimensions measured by the Worldwide Governance Indicators.

4.1.2. Independent variable: Resource Governance Index

The second important concept to analyse is *compliance with natural resource governance*. If governance is already hard to measure, this task becomes even harder when it is meant to be applied to a specific area or economic sector in particular. Natural resources are no exception in this regard. Mejía Acosta (2010) tried to delimit the concept in order to make it more usable in scientific research and defined it as “the set of strategies aimed at improving the transparency and accountability of governments and private companies during the licensing, exploration, contracting, extraction, revenue generation and allocation of natural resources” (Mejía Acosta, 2010).

Once natural resource governance has been defined, there are still some other concepts to clarifiy for the correct measurement of the independent variable of this research. Natural

resources as a concept is meant to include oil, natural gas, minerals, metals, forests, fisheries and water resources. However, given the fact that the literature on political economy has only provided evidence for the links between natural resources, economic growth and institutions in the field of extractive industries, this research is going to focus only on oil, gas and mining sectors. In fact, the countries that are bestowed with these kinds of resources are the ones that struggle the most to turn them into actual wealth or welfare for their citizens. For this reason, they are also the target sectors in regard to which global initiatives and international standards for the better management of resources have been formulated.

Given the difficulties for defining natural resouce governance there is also an inherent difficulty when it comes to measurement of the concept. In order to do it I have used the scores provided by the Resource Governance Index. This index classifies resource-rich countries according to their governance quality in the area of extractive industries, namely oil, gas and mineral sector. The Index covers countries that account for around 85 percent of the global oil production, 90 percent of diamonds and 80 percent of copper (Resource Governance Index, 2013). The Natural Resource Governance Institute is responsible for constructing the index and classifies resource-rich countries according to their performance in four governance areas: Institutional and Legal Setting, Reporting Practices, Safeguards and Quality Controls, and Enabling Environment.

According to their own methodology reporting, the data on the last version of the index was collected through 173-item questionnaires conducted between January and October 2012. The responses to those questionnaires were coded in 45 indicators. These indicators were used to build the institutional, reporting and safeguard areas, while the environment area was built using data collected from other sources such as the Transparency International, the Worldwide Governance Indicators and the International Budget Partnership. However, these areas do not have the same weight in order to construct the final Index. According to their methodology section, the researchers from the NRGI weigh each dimension in the following way: Institutional and Legal Setting 20%, Reporting Practices 40%, Safeguards and Quality Controls 20%, Enabling Environment 20%. The argument behind this weighing is that actual and effective reporting practices are an essential part for transparency and good governance, therefore Reporting Practices deserves a more relevant place in the calculations for the final score.

Once the results are drawn, the Resource Governance Index classifies countries in four groups according to their performance. Within the range between a score of 100 and 71, the Index

would classify a country as having a '*satisfactory'* performance in natural resource governance. The next category identifies countries that show a '*partial'* compliance with the natural resource governance standards, which are those with a score between 70 and 51. Countries with a score falling within the range 50-41 are identified as '*weak'* performers while the bottom of the ranking is plagued with countries scoring between 40 and 0, those that are assessed to be '*failing'* in their natural resource governance performance.

The Index elaborated by the Resource Governance Index is the best available indicator for measuring natural resource governance, despite the fact that it is only released every three years. Therefore, the Index released in 2013 was used in order to conduct this research. As the formulated research question deals with compliance with natural resource governance standards, I took into consideration for my case selection countries that performed either within the '*satisfactory'* or the '*partial'* score range. This means that they presented a rather acceptable compliance with the standards of the Natural Resource Governance Institute and therefore they conform my population. Given the relatively broad availability of data on the different variables to study for most of the cases of the population, I have considered them all for the purpose of the research, thus accounting for 23 cases.

The Resource Governance Index analyses 58 countries. 37 of them are classified as resource-rich by the International Monetary Fund based on the grounds that their extractive sector accounts for at least 25 percent of their GDP. However, the Index also includes four prospective resource-rich countries, nine countries whose minerals hold potential for future fiscal revenues, two countries that participate in the Extractive Industries Transparency Initiative (EITI) despite they are not resource-rich and six countries that are part of the top 20 world producers of hydrocarbons and minerals. Similarly, the Resource Governance Index also includes three subnational entities of federal states that have competencies in natural resource management –namely in the cases of the Gulf of Mexico (United States), Western Australia (Australia) and Alberta (Canada)-. Due to the fact that the figures for the rest of the variables are only available at the national level these subnational entities have not been considered as cases for this research.

After the identification of both the independent and the dependent variables, it should be noticed that the Enabling Environment dimension of the Resource Governance Index uses the Worldwide Governance Indicators as a source for building its score. Therefore, if this research was meant to use the Resource Governance Index scores as presented in the official sources of the Natural Resource Governance Institute it would be seriously flawed. In order to avoid this

bias, I have recoded the data of the independent variable in a way that better suits the goal of this research. Consequently, I have used the scores of the other three dimensions for each of the 23 cases and I have recalculated them in order to build my independent variable. I have tried to stick to the original weighting as much as possible, thus giving Institutional and Legal Setting a weight of 30%, maintaining the Reporting Practices weight in a 40% and increasing the one for Safeguards and Quality Controls up to a 30%. In this way, Reporting Practices retains its primacy in regard to the other dimensions and the remaining two sources of data still have a similiar weighting. The resulting score for each of the cases is therefore the weighted average of the individual scores in each of the dimensions and has been recoded in a scale from 0 to 1, being 1 the full compliance with international standards of natural resource governance.

4.1.3. Interaction effects and model

In addition to my independent variable and to my set of dependent variables, there are also some other variables that may have an effect on the causal relation between them. In order to fully acknowledge the influence of the score in the Resource Governance Index on the overall governance performance of resource-rich countries I have decided to include a set of interaction effects in the model so the research would better grasp the actual interactions of the variables under study. As outlined in the previous sections of this document, these interactions may either amplify or cushion the impact of the score in the Resource Governance Index on the six dimensions of the Worldwide Governance Indicators. The set of moderators include resource dependence, the level of human development, the existence of state-owned enterprises in the extractives sector and the existence of natural resource funds.

· *Resource dependence*

As stated in previous sections of this document, the political economy literature on the resource curse has focused lately on the level of resource dependence instead of the level of resource abundance in order to study the resource curse. As it has been said, the more dependent a national economy was on resource rents the harder it was for it to transform those rents into actual economic growth. For this reason, it could be expected that the level of resource dependence would have a similarly detrimental effect on the governance performance of resource-rich countries.

The level of resource dependence of a country is hard to measure but for the purpose of this research I have used the share of natural resource rents in the overall Gross Domestic Product

(GDP) as a proxy for the extent to which national economies are reliant on natural resources. The data has been collected from the World Bank Development Indicators, which provide details on the share of resource rents as percentage of GDP. As the Resource Governance Index collected its data in 2012, I have calculated the average of resource dependence for the years 2011-2013 to obtain a bigger picture of the resource dependence of each country, always taking into account the availability of data. This variable has also been recoded in a scale from 0 to 1.

· *Human development*

According to the literature reviewed in previous sections of this document, the level of development of a country is intrinsically linked to its institutional development. Just as it may happen in regard to the resource dependence variable, if such link is witnessed in the political economy literature dealing with the resource curse it could be expected to find a similar link in the study of the governance indicators of countries. The use of human development as intermediate effect would provide more clues in regard to the actual influence of this indicator on governance. At the same time, its inclusion broadens the scope escaping from mere economic considerations.

The level of human development is hard to measure given the fact that there is uncertainty about which areas should be counted as 'development'. However, for the purpose of this research it has been measured through the data provided by the Human Development Index (HDI) that the United Nations Development Programme (UNDP) releases every year. The HDI accounts for several different indicators of life expectancy at birth, literacy rate and how equitably resources are shared within a country (UNDP, n. d.). These indicators are believed to provide a rather accurate picture of the development of a country without relying on mere economic considerations and therefore resonating with the overall capability of the institutions of that country to channel demands of the citizenry in a successful way. In order to build this research, the scores of the countries under study have been taken for the year 2013, the year they also obtained the score in the Resource Governance Index. This variable has also been recoded in a scale from 0 to 1.

· *State-owned enterprises and natural resource funds*

As mentioned in previous sections of this document, a relevant interaction effect that may influence the impact of natural resource management standards on the governance indicators of resource-rich countries is the functioning of the state in particular. In this regard, it is

important to consider how coherent are the actions between policymakers and bureaucrats and up to which extent their interests and decisions resonate with each others'. This would be useful for testing the extent up to which general theories on public administration and autonomy of bureaucrats can be applied to the extractives sector in regard to governance indicators.

As a consequence, the existence of state-owned enterprises (SOEs) in the extractives sector is also an important interaction effect that had to be accounted for. The data on the existence of these enterprises has been collected from the Natural Resource Governance Institute. A similar effect may be driven by the existence of sovereign wealth funds that receive natural resource rents for investment. The data on the existence of natural resource funds has also been collected from the databases of the Natural Resource Governance Institute. Both variables have been considered to be dummy variables in which 1 indicates the existence of a state-owned enterprise or a natural resource fund, while 0 indicates their abscence. Despite their similar expected effect on the influence of the independent variable on the dependent ones, both variables have been considered separately in order to fully account for their moderating effect in cases presenting the existence of both, the existence of just one of them or the absence of both.

After taking into consideration these moderator variables, the regression model would therefore read as follows:

$$Y = a + bX + cZ + dXZ$$

This model would be applied for each and every single one of the dimensions accounted for in the Worldwide Governance Indicators and for each of the intermediate effects detailed in the previous lines of this section. This model would help me provide an answer to the research question that underpins this research, as well as permitting the testing of the different hypotheses that have been formulated in previous sections of this document.

4.2. Data collection plan and case selection

The data for measuring these variables is not based on primary but on secondary sources. The reason behind this choice is that the data provided by specialized institutions such as the Natural Resource Governance Institute and the World Bank is of much higher quality than the data that I could have collected myself. The time and economic constraints that I am subject to completely fade for organisations like the aforementioned ones. Some authors have highlighted the advantages of using secondary data for social science research

(Dale et al., 1988; Bryman, 2008). Despite that, I have recoded the data in order to provide for a better comparison of the different variables –as it has been outlined in the previous paragraphs of this section-, but also to reduce the complexity and heteoregeneity of the data. The data was collected from 2013 as it is the year in which the most recent report of the Resource Governance Index was released.

The case selection is based on the grounds that the goal of this study is to acknowledge the effect and impact of compliance with international standards on the overall governance performance. As a result, only countries that present such satisfactory compliance can be selected. In spite of this fact, the aim of this research in terms of external validity is to provide some clues to policymakers, corporate actors, NGOs, practitioners and scholars on how the measures taken to comply with international standards in the extractives sector fit in the bigger picture of a country's governance framework. By selecting all countries that satisfactorily or partially comply with these standards according to the Natural Resource Governance Institute, the possibilities of drawing conclusions for all resource-rich countries are significantly increased. The selected cases are thus Norway, the United Kingdom, Brazil, Mexico, Chile, Colombia, Trinidad and Tobago and Peru as countries showing a *satisfactory* compliance with the resource governance standards; and India, Timor-Leste, Indonesia, Ghana, Liberia, Zambia, Ecuador, Kazakhstan, the Russian Federation, Venezuela, South Africa, the Philippines, Bolivia, Marocco and Mongolia as countries showing a *partial* compliance with them (N = 23). As mentioned before, the Gulf of Mexico (United States), Western Australia (Australia) and Alberta (Canada) were not considered because they are sub-national entities and therefore do not match the selection criteria for this study.

In order to run the regression models I have chosen to run an ordinary least squares (OLS) multivariate regression. Early studies in social science research pointed out at the usefulness of using multivariate regression in statistics in order to understand the interaction effects of two or more variables (Finn, 1974; Bock, 1975; Timm, 1975). Some of them were also more specific and focused on the suitability of SPSS software for building a proper statistical multivariate regression research that could provide robust and solid outcomes (Nie et al., 1975; Karpman, 1981).

Finally, the OLS regressions were run for obtaning insights on the different interaction effects that the aforementioned variables presented in the previous paragraphs of this document. The study thus counts with six dependent variables that make up for the overall governance performance: Government Effectiveness, Voice and Accountability, Political Stability and

Absence of Violence, Regulatory Quality, Rule of Law and Control of Corruption. All of them are numerical ordinal variables recoded to present values within the interval 0-1.

On the other hand, the research counts with a dependent nominal ordinal variable, the score achieved in the Resource Governance Index (RGI), which has also been recoded to present values from 0-1. The impact of RGI on the set of dependent variables might be moderated by a set of variables that can exert an intermediate effect on this otherwise plain and direct influence. This set is made up of the variables resource dependence, human development, presence of state-owned enterprise and presence of natural resource fund. The two former are numerical ordinal variables recoded to present values between 0-1, while the two latter are dummy variables which present values of 0 for the lack of presence and 1 for the effective presence. With this into consideration, I proceed to present and analyse the data.

V. Data Analysis

Once the data was collected and recoded, I have proceeded to test the correlation between the independent variable and the different dependent variables that make up the Worldwide Governance Indicators. I did this in order to run a preliminary test on the relationship between them to dismiss any variable that would not have a correlation that is significant enough for its inclusion in the regression model. This would also permit the focus of the analysis on the dependent variable whose correlation is more significant while using the rest of the variables as secondary analysis to assess the strength of the impact of X on Y. The results of these correlations are presented in Table 1.

Table 1. *Unstandardized Pearson coefficients between the independent variable and the set of dependent variables. * p < 0.05; ** p < 0.01. N = 23.*

	Government Effectiveness (1)	*Voice and Accountability (2)*	*Regulatory Quality (3)*	*Rule of Law (4)*	*Control of Corruption (5)*
Resource Governance Index (2013)	0.495*	0.624**	0.575**	0.490*	0.545**

The correlations in Table 1 evidence that there is a strong relation between the independent variable and five out of six of the dependent variables that conform the Worldwide Governance Indicators. The only dimension that showed no significant correlation was Political Stability and Absence of Violence and therefore its results are not presented in the aforementioned table and will not be taken into account for this research. Given the results that show a similarly strength on all correlations of the significant dimensions, it is very hard to pick just one dependent variable for the primary analysis while using the other four just for robustness checks. Despite this, I will use Voice and Accountability as the primary dependent variable due to the fact that it presents the strongest correlation with the independent variable.

5.1. Voice and Accountability

Once the preliminary selection of the first dependent variable has been done, I have proceeded to test the hypotheses outlined in the previous sections of this document. In order

to provide a more detailed observations of results, I hereby present the regression table that conform the outcome elaborated after running the OLS multivariate regressions. First, I ran the simple regression for the independent variable RGI to assess its effect on the set of dependent variables. The results of such regression are presented in Table 2.

Table 2. *Unstandardized coefficients for the impact of the independent variable and the intermediate effects on Voice and Accountability. Standard errors in parenthesis. * p < 0.05; ** p < 0.01. N = 23.*

***Independent variable* + intermediate effects**	**Voice and Accountability**				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
Resource Governance Index	1.203	1.156	0.475	0.342	0.308
	(0.329)**	(0.332)**	(0.616)	(0.621)	(0.627)
Resource dependence		-0.480	-0.526	-0.412	-0.270
		(0.476)	(0.469)	(0.475)	(0.506)
Human development			0.614	0.815	0.969
			(0.471)	(0.498)	(0.533)
State-owned enterprises				-0.140	-0.129
				(0.121)	(0.123)
Natural resource funds					-0.106
					(0.123)
R Square	0.389	0.419	0.467	0.504	0.524
	(0.172)	(0.172)	(0.169)	(0.168)	(0.169)

The results in this table confirm that the inclusion of the different intermediate effects contribute to the further explanation of the variation in Voice and Accountability, with the complete model explaining up to 52.4% of such variation. Despite this, it should be noted that the only significant coefficients are those from the independent variable in the first two regression models. These coefficients provide some information on the effect of the compliance with international standards of natural resource management on Voice and Accountaiblity. According to these results, an increase of one point in the score of the Resource Governance Index would provoke an increase of 1.203 in the aforementioned dimension of the Worldwide Governance Indicators. This impact would be slightly reduced to 1.156 if the intermediate effect of resource dependence is considered. This, however, does not mean that such increase is produced by the intermediate effect, as that coefficient is not

significant enough to be taken into consideration. In fact, the lack of significance of the coefficients that are produced by the intermediate effects do not allow for the confirmation or dismissal of the hypotheses formulated in previous sections of this document.

By taking a closer look to all models it could be concluded that the interaction of all the variables under study explain a substantial amount of the variation of the dependent variable. Despite this, there is still a considerable inference of other variables that have not been studied in this research. Given the fact that the Voice and Accountability dimension takes into account the possibility that citizens have to voice their concerns and the existing mechanisms to channel those concerns, the remaining variation might be explained by variables such as the existence of oversight institutions such as an Ombudsman that would veil for the respect of freedom of assembly. Another related variable could be the independence of the media, as a media sector that is highly influenced by the government is less likely to respond to citizens' concerns. However, the Voice and Accountability dimension already includes some indicators of press freedom and therefore this variable is partially considered. Finally, the links between religion and state authority might also have a considerable influence on the chances citizenry has in order to raise their voice and to enjoy their freedoms for example in the existence of a constitutionally-declared state religion.

5.2. Regulatory Quality

For a deeper understanding of the impact of the independent variable and the intermediate effects on the overall governance performance of resource-rich countries I decided to also analyse the other dimensions of the Worldwide Governance Indicators. This would provide a more complete understanding of the interactions between variables and thus would permit a better formulation of inferences, which would in turn help me confirm or dismiss my hypotheses. The remaining dimensions were studied on the basis of the correlation of their values with those of the independent variable. The results of the regressions for Regulatory Quality are thus presented in Table 3.

Table 3. *Unstandardized coefficients for the impact of the independent variable and the intermediate effects on Regulatory Quality. Standard errors in parenthesis. * p < 0.05; ** p < 0.01. N = 23.*

***Independent variable* + intermediate effects**	**Regulatory Quality**				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
Resource Governance Index	1.276	1.242	-0.281	-0.415	-0.462
	(0.396)**	(0.406)**	(0.671)	(0.680)	(0.678)
Resource dependence		-0.346	-0.449	-0.335	-0.141
		(0.583)	(0.511)	(0.521)	(0.548)
Human development			1.374	1.576	1.787
			(0.513)	(0.545)*	(0.576)**
State-owned enterprises				-0.141	-0.125
				(0.132)	(0.133)
Natural resource funds					-0.145
					(0.133)
R Square	0.331	0.342	0.522	0.551	0.580
	(0.208)	(0.211)	(0.184)	(0.184)	(0.183)

The results in Table 3 narrow the focus of the study as shows no significance of the coefficients for most of the interactions between variables but provides valuable insights on the relations between the variables. This is particularly striking taking into consideration that the models explain up to a 58% of the variation of the score of resource-rich countries in Regulatory Quality, which is higher than the fit for Voice and Accountability. Similar to the results in Table 2, the impact of the compliance with international standards is significant in the series of coefficients. This impact is once again positive, provoking an increase of 1.276 in the score of Regulatory Quality for each unit increase in the compliance with international standards of natural resource governance. This impact would diminish when other intermediate effects are taken into account according to model 2. Therefore, these results provide further support for the confirmation of H1.

While there was no other significance in Table 2, the results presented in Table 3 show significance for the coefficients of the intermediate effect of human development for models 4 and 5. According to Table 3, the impact of the compliance with international standards of natural resource management on Regulatory Quality would be amplified by the level of human

development in a positive direction. For each unit increase in the independent variable modulated by the intermediate effect, the Regulatory Quality of the country would thus increase by 1.576 according to model 4 and by as much as 1.787 according to model 5. These results would evidence the importance of considering the different dimensions of the Worldwide Governance Indicators separately, given that such a significance was not present in Table 2 for the variable Voice and Accountability.

Similar to what can be observed in Table 2, the results in Table 3 show that the suitability of the model for explaining the variation in Regulatory Quality increases significantly when the intermediate effects are taken into account. This raises the fit of the model from a modest 33.1% of explanation to the aforementioned 58.0%. However, there is still a substantial part of the variation in Regulatory Quality that falls out of the explanation provided by the model. According to the remarks provided in Kaufmann et al. (2011), the Regulatory Quality dimension gives particular importance to the extent up to which governments and legal systems permit the smooth development of the private sector. Therefore, the preferences of the government may have an inference in the variation of this dimension as well. For example, capitalist systems or other models in which private property is seen as a fundamental basis for the economy might be more prone to have a bigger increase in this dimension than those countries with a more collectivist approach.

5.3. Control of Corruption

The lack of significance of most of the coefficients in Table 3 and the significance of the intermediate effect of human development in two of the models under consideration encouraged me to dig deeper. As a consequence I decided to run the regressions with the following most correlational dimension of the Worldwide Governance Indicators according to the results of Table 1. The output of these regressions is presented in the following table.

Table 4. *Unstandardized coefficients for the impact of the independent variable and the intermediate effects on Control of Corruption. Standard errors in parenthesis. * p < 0.05; ** p < 0.01. N = 23.*

***Independent variable* + intermediate effects**	**Control of Corruption**				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
Resource Governance Index	1.144	1.104	-0.098	-0.226	-0.288
	(0.384)**	(0.392)*	(0.687)	(0.699)	(0.681)
Resource dependence		-0.401	-0.482	-0.373	-0.117
		(0.563)	(0.524)	(0.535)	(0.550)
Human development			1.085	1.279	1.557
			(0.526)	(0.561)*	(0.579)*
State-owned enterprises				-0.135	-0.115
				(0.136)	(0.133)
Natural resource funds					-0.191
					(0.134)
R Square	0.297	0.314	0.440	0.469	0.526
	(0.201)	(0.204)	(0.189)	(0.189)	(0.184)

The results in Table 4 are similar to those experienced in the Regulatory Quality dimension. The significance of the independent variable is once again present in models 1 and 2 although the results suggest the impact is slightly less substantial for Control of Corruption than for the previous two dimensions. In this case, for each unit increase in the compliance with international standards of natural resource management it could be expected Control of Corruption to increase by 1.144 according to model 1 and by 1.104 if we consider the intermediate effect of resource dependence. This would provide further support for H1.

On the other hand, the intermediate effect of human development is again significant in models 4 and 5. This significance unveils a positive effect that would in turn mean that a unit increase in the compliance with international standards of natural resource management with the effect of human development would provoke an increase of 1.279 in Control of Corruption. This increase would rise up to 1.557 if we consider model 5. This would mean that H3 should get some credit as such positive relationship is seen both in regard to Regulatory Quality and in regard to Control of Corruption. However, I decided to run the regressions for the rest of dimensions in order to check if they present similar results.

In regard to the model fit, the results in Table 4 are more similar to those in Table 2 than to those in Table 3. Model 1 considering the independent variable alone only explains 29.7% of the variation in the Control of Corruption dimension and therefore this suggests that Control of Corruption is less influenced by the compliance with international standards on natural resource governance than the previous indicators. Despite this, when the intermediate effects are accounted for the fit of the model raises up to an explanation of 52.6% of the variation of the dependent variable. Nevertheless, this in turn suggests there are other variables that have not been considered in this research that explain a significant amount of the changes in Control of Corruption. Given the fact that this dimension accounts for public perceptions on the motivation of their elites for acting in the way they do, it is also subject to significant influence from a wide range of other perceptions and factors. For example, similarly to what happens in regad to Voice and Accountability, if there are independent oversight institutions that monitor governmental elites and bureaucrats and provide adequate mechanisms for accountability this is expected to have an impact on public perceptions' on corruption.

5.4. Government Effectiveness

Due to the fact that Table 4 presents results that further serve as a basis for confirming H1 and provides some figures that could lead to the potential confirmation of H3, I decided to run the regressions on the following dimension that presented a stronger correlation with the independent variable according to Table 1.

Table 5. *Unstandardized coefficients for the impact of the independent variable and the intermediate effects on Government Effectiveness. Standard errors in parenthesis. * p < 0.05; ** p < 0.01. N = 23.*

***Independent variable* +**	**Government Effectiveness**				
intermediate effects	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Resource Governance Index	1.018	0.973	-0.897	-0.884	-0.931
	(0.390)*	(0.397)*	(0.579)	(0.605)	(0.598)
Resource dependence		-0.452	-0.578	-0.589	-0.395
		(0.570)	(0.442)	(0.463)	(0.483)
Human development			1.687	1.669	1.879
			(0.443)**	(0.486)**	(0.508)**
State-owned enterprises				0.013	0.029
				(0.118)	(0.117)
Natural resource funds					-0.144
					(0.117)
R Square	0.245	0.268	0.585	0.585	0.619
	(0.204)	(0.206)	(0.159)	(0.164)	(0.161)

The results in Table 5 provide further support for the assumptions that were outlined in the previous paragraphs of this section. For the Government Effectiveness dimension, the compliance with international standards of natural resource management has a significant and positive impact on its variation. For each unit increase in the independent variable the Government Effectiveness dimension would increase by 1.018 according to model 1 and by 0.973 if we consider the intermediate effect of resource dependence. However, contrary to what was observed in the previous dimensions under study, the model fit is significantly lower for both model 1 and model 2. For the former it explains only 24.5% of the variation in Government Effectiveness while for the latter this percentage only rises slightly up to a 26.8% of explanation.

Despite this lower figures, the results in Table 5 confirm the steep increase in the model fit once the intermediate effect of human development is considered, explaining between a 58.5% and a 61.9% of the variation in the dependent variable. Furthermore, the positive impact that the intermediate effect of human development is expected to have on the dependent variable is confirmed by these results, thus providing further support for the

confirmation of H3. By virtue of the figures presented in Table 5, each unit increase in such intermediate effect would provoke an increase of 1.687 in Government Effectiveness – according to model 3- and this would rise up to an increase of 1.879 if we consider the results in model 5. In the case of Government Effectiveness the influence of human development is even more evident than in other dimensions, being significant in all the models in which it is considered.

Despite the fact that the fit of the models presented in Table 5 is considerable higher than the ones for other dimensions and therefore explain variations of the dependent variable up to a greater extent, there is still a significant variation that falls out of the reach of this study. Taking into account that the Government Effectiveness dimension of the Worldwide Governance Indicators is based on citizens' perception of how well their public services work this variable is also susceptible to changes in the level of institutional oversight. This resembles to the alternative inferences that could play a part in explaining the variation of Voice and Accountability and Control of Corruption. At the same time, Government Effectiveness is also based on the level of confidence that citizens express in regard to how political elites stick to their commitments. Therefore, as elites in democratic countries are more dependent on citizen's approval for remaining in their position, it could be expected that they have less incentives not to keep their commitments. As a result, it might be argued that the level of democratic quality of countries might have an impact on Government Effectiveness that is not considered by the present research.

5.5. Rule of Law

The results in Table 5 therefore provide further support for H1 as the impact of the independent variable is positive and significant in two of the models. In addition, it provides further and slightly stronger support for the confirmation of H3 given that the intermediate effect of human development amplifies this positive impact and thus provokes a bigger increase in the value of the dependent variable for each unit increase in the independent one. However, I have proceeded to analyse the remaining dimension that presented a significant correlation with the independent variable according Table 1.

Table 6. *Unstandardized coefficients for the impact of the independent variable and the intermediate effects on Rule of Law. Standard errors in parenthesis. * p < 0.05; ** p < 0.01. N = 23.*

***Independent variable* + intermediate effects**	**Rule of Law**				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
Resource Governance Index	1.081	1.054	-0.381	-0.459	-0.521
	(0.419)*	(0.432)*	(0.741)	(0.768)	(0.756)
Resource dependence		-0.277	-0.374	-0.307	-0.050
		(0.620)	(0.565)	(0.588)	(0.611)
Human development			1.295	1.413	1.692
			(0.567)*	(0.616)*	(0.642)*
State-owned enterprises				-0.082	-0.061
				(0.150)	(0.148)
Natural resource funds					-0.191
					(0.148)
R Square	0.241	0.248	0.410	0.420	0.472
	(0.220)	(0.224)	(0.204)	(0.207)	(0.204)

The results in Table 6 are in line with the previous regressions and shows further support for the confirmation of both H1 and H3. Similarly to what happened in the other four dimensions, Rule of Law is influenced by the independent variable and by the intermediate effect of human development in the expected way while the rest of results lack significance for confirming or dismissing the correspondent hypotheses. Furthermore, the presented results also confirm the trend in the model fit, significantly increasing when the intermediate effect of human development is considered.

In this regard, the sole impact of the compliance with international standards of natural resource management only explains 24.1% of the variation in Rule of Law. However, this figure increases considerably in models 3, 4 and 5 when the intermediate effect of human development is considering, account for as much as 41.0%, 42.0% and 47.2% of the variation in the dependent variable respectively. Despite this share is remarkably lower than the ones present in the previous tables, it supports the importance of the effect of human development at the time of explaining the variation of the Worldwide Governance Indicators. This in turn hints at the suitability of considering this variable at the time of designing the research.

As previously stated, the compliance with international standards of natural resource management has a positive impact on Rule of Law. According to the results in Table 6 or each unit increase in the independent variable, the dependent variable is expected to increase by 1.081 in model 1 and by 1.054 if we introduce the intermediate effect of resource dependence in the model. Together with the findings in the rest of the tables presented in this section, this would provide enough support for the confirmation of H1. On the other hand, the intermediate effect of human development is once again found to amplify the impact of the independent variable, provoking an increase of between 1.295 and 1.692 depending on the model that is considered.

In spite of the aforementioned increase of the model fit that is derived from the inclusion of the intermediate effect of the human development, it should be noted that the amount of variation in the Rule of Law dimension explained by these models is still considerably low. In fact, the figures are the lowest of all dimensions under study responding also to its lower correlation with the independent variable. This could be explained by the fact that the Rule of Law dimension is made up of citizens' perceptions on the functioning of a wide range of institutions, including the police or the entire judicial system, as well as the enforcement of property rights (Kaufmann et al., 2011). This increases the number of variables that might act as inferences on the variation in the values of the dependent variable and in turn were not considered in this research. For example, the way judges are selected or elected for their positions might have an impact that could affect the interaction between the independent and dependent variables of this research.

5.6. Concluding analysis

The analysis of the data collected has provided some valuable insights for the purpose of this study. In the previous sections of this document the literature on political economy and corporate engagement was reviewed, leading to an interesting question regarding the links between the compliance with international standards of natural resource management and the overall governance performance of resource-rich countries. These links were hypothesized through several assumptions that I have tested in this section. The figures in Tables 1-6 have become the underpinning for an analysis that has led to the following conclusions.

First, there is substantial evidence for the confirmation of H1, given that Tables 2-6 have showed that the compliance with the international standards measured in the Resource Governance Index has a positive impact on the overall governance performance of countries, namely in the areas of Voice and Accountability, Regulatory Quality, Control of Corruption,

Government Effectiveness and Rule of Law. This positive impact is particularly strong in the dimensions of Voice and Accountability, Regulatory Quality and Rule of Law.

However, there were some other variables that were expected to have a significant intermediate effect that would either amplify or diminish the strength of such impact. Resource dependence was thought to have a negative effect in the relationship between independent and dependent variables given that the so-called resource curse and therefore it was expected to witness a similar behavior in this research. Despite this, the evidence provided by the regression results has showed no significance for either the confirmation or the dismissal of H2.

The political economy literature on the resource curse and on natural resources also points out at the relevant role that development plays in the transformation of resource rents into economic growth and institutional quality. For this reason the level of human development was expected to have a positive amplifying effect on the relationship between the independent and the dependent variables. The results in Table 2 did not provide any support for the confirmation or the dismissal of H3, but the robustness checks conducted in Tables 3-6 did otherwise. Figures suggested that the hypothesized effect is witnessed in regard to the Regulatory Quality, Control of Corruption, Government Effectiveness and Rule of Law dimensions. Therefore, these results would provide a substantial basis for the confirmation of H3.

Finally, the field of public administration has provided some insights on the relationships between bureaucrats and policymakers that appoint them. These relationships tend to present either a submission of bureaucrats to the political authority of politicians or an opposite effect of bureaucracies that try to preserve their autonomy and jeopardize the line of action set by politicians. Although this is not the main focus of this research, it was also important to analyse these insights given the importance of state-owned enterprises and natural resource funds in the extractives sector. However, the results in Tables 2-6 were not significant enough to provide a robust basis that would confirm or dismiss the cushioning effect of these variables on the impact of compliance with international standards.

VI. Final remarks

The extraction of non-renewal natural resources –namely oil, gas, minerals and metals- has attracted much attention from policymakers and academics in different areas of study. This interest has been transformed into a wide range of scholarly research on the effects of the discovery of natural resources and the impact that their exploitation might have on national economic systems. This is even more important taking into account that most resource-rich countries are developing nations that struggle with their development figures and with sub-optimal state structures. For these countries finding underground resources is a unique opportunity to escape poverty and to create wealth that would foster the well-being of their citizens.

This vast literature has mainly been focused on the field of political economy, trying to clarify the policy choices that political elites had within their reach. Most of these studies agreed on a similar detrimental effect that resource rents apparently had on other economic sectors, labelled either as Dutch disease or resource curse, but explaining the same concerning sink effect that extractive industries had. Despite this apparently clear link, there have been some studies that claimed that it is not resource dependence but a lack of a proper institutional structure what influenced the failure of managing resource rents. This introduced the institutional variable in the debate of exploitation of natural resources but in turn leaves the window open to many other questions and concerns in regard to resource management and the promotion of resource-based development.

At the same time, another body of literature was developed driven by the delocalization of business and economic activities. The globalization of economy permitted a much freer and flexible investment in offshore operations that increased the size and complexity of corporations. This is particularly important in the extractives sector, as developing countries count with the actual natural resources while corporations from developed countries are the ones with the required capital and know-how to exploit them. This provokes a power and information asymmetry between governments of target countries and entreprises from industrialized economies.

Such asymmetries raised concerns on the sustainability of corporate investments in the extractives sector in resource-rich countries and gave birth to a new body of literature that studied the ways in which multinational corporations engaged with other stakeholders. This provoked a renewed interest in corporate social responsibility (CSR) practices and in whether these companies were respectful with human rights and environmental standards when they

operated offshore. This evolved into the literature on global value chain governance, which studies the way in which these production chains function, including their sustainability, their engagement with local populations and their adherence to internationally agreed standards.

Finally, the increase in these multinational operations has evidenced the necessity of creating specific global standards that go beyond generic human rights or environmental matters. A review of the most prominent initiatives that attempt at promoting a sustainable exploitation of natural resources has been provided in this document to better understand their implications and the considerations that their formulation has implied. The Resource Governance Index is one of those initiatives, measuring the sustainability and inclusiveness of the exploitation of oil, gas and mines in resource-rich countries. This Index provides an important reference point to track the development of the extractives sector and for this reason it is the underpinning of the independent variable of this research.

It is the gap that the interaction of these academic fields what motivated my study. There was evidence that the discovery of natural resources had a detrimental impact on economic growth –with no regard to whether the explanation provided was purely economic or based on institutional factors- and there is a growing concern in regard to how sustainable offshore business and international investment are, which is particularly striking in the extractives sector. There are also existing international standards that provide the basis for the assessment of these practices, thus setting the ground for this research. There is a growing business in the extractives sector that is becoming intrinsically transnational but how does compliance with the formulated standards for conducting business affect local populations in terms of governance?

The present study provides an answer to this question by analysing the interactions between the compliance with the parameters measured by the Resource Governance Index and the different dimensions of the Worldwide Governance Indicators. By conducting a quantitative research of the compliant countries I have obtained interesting results that provide an answer to the research question I formulated in the first sections of this document. Furthermore, valuable insights are also provided that evidence the complexity and meaningfulness of the research on natural resource management.

According to the results presented in the analytical section of this document, the hypothesis that compliance with international standards of sustainable resource management has a positive impact on the governance is confirmed. This is evidenced by the impact witnessed in five of the six dimensions measured –namely Voice and Accountability, Regulatory Quality,

Control of Corruption, Government Effectiveness and Rule of Law-. Therefore the institutional variable that the works of Acemoglu (2008), Acemoglu et al (2014) and Acemoglu and Robinson (2012) introduced in the debate over natural resources acquires renewed importance. Institutions are essential for turning natural resources into growth but also a more inclusive and sustainable management of natural resources is benefitial for the robustness of the institutional architecture of resource-rich countries. On the other hand, it is also confirmed that this positive impact is even stronger when it is paired with the level of human development. The results show that resource-rich countries that are compliant with international standards of sustainable resource management perform even better in the different areas of governance when they have a highest level of human development. This was confirmed by the results of four of the six dimensions –namely Regulatory Quality, Control of Corruption, Government Effectiveness and Rule of Law-. Therefore, the results of my study would indicate that natural resources are not a curse, as it was traditionally argued (Sachs and Warner, 1995, 2001; Sala-i-Martin and Subramanian, 2003) but an opportunity for development given that the necessary elements are present –namely adherence to international standards and to some extent human development-. This would be more in line with the work of those scholars that argued the resource curse was actually a red herring covering other explanations (Boschini et al., 2007; Brunnschweiler, 2008; Brunnschweiler and Bulte, 2008).

On the other hand, the different hypotheses for other intermediate effects could not be either confirmed nor dismissed on the basis of a lack of significance of their impact. This gives a hint of the complexity of the issue under research and sets the ground for further studies that could focus specifically on each of these intermediate effects to better understand the influence they have on the link between compliance with standards on resource management and the different dimensions of governance. Such an undertaking would definitely help this interesting field of research develop and would adequately complement the findings presented in this document. This evidences some shortcomings of my research, failing at providing a much broader scope of the interactions between the variables at stake. However, the insights that I provide in this document would definitely set the ground for further research on how some of these intermediate effects affect governance.

Further research could also be done in light of the amount of variation in the different dependent variables that is actually explained by the models presented hereby. As mentioned in the analytical section of this study, there is still a substantial amount of variation that has fallen out of the reach of the explanations provided in the design of the present research. Even

if such amount is not high enough to jeopardise the findings of my study, it definitely provides an interesting starting point for researchers that are concerned about the links between natural resources and good governance. I have drawn insights from a wide range of bodies of literature ranging from political economy to global value chains and even considering the scholarly research on bureaucrats' autonomy in regard to policymakers. Therefore, subsequent researchs could bear this in mind and conduct a much more detailed study on specific aspects such as the existence of a state religion that might affect Voice and Accountability via limiting freedom of speech. Another suggestion would be taking into account the economic system upheld by the governmens of resource-rich countries, as Regulatory Quality and Rule of Law consider private property as an essential part of their score. Last but not least, some of the indicators considered are based on public perceptions and therefore following studies could also pay attention to some other factors that may affect those perceptions but that escape the focus on natural resources that the present study has defined.

The results that I am presenting in this document have been attained through the conduction of a quantitative method, which was the most suitable one given the logic behind the research question formulated in the first sections of the study and the nature of the data available. The aim of such question was providing a general trend by analysing a medium number of cases to assess the interactions between the compliance with the standards measured by the Resource Governance Index and the Worldwide Governance Indicators in compliant resource-rich countries. For this reason, a micro-oriented study was not possible to be conducted. However, at the same time my research paves the way for this kind of studies to be carried out. Once the general trend has been assessed, further research could focus on the specificities of a particular country with an outstanding performance in terms of natural resource management or with a significant improvement in its governance indicators in order to provide more in-depth knowledge of case studies. On the other hand, further macro-oriented research can also be conducted building upon the present study but analysing the overall governance performance of those resource-rich countries that fail to comply with the international standards of natural resource management. This would enlarge the scope even broader by assessing whether the positive effect of good practices of natural resource management on the different dimensions of governance turns negative when such compliance is not met.

As a conclusion, this research provides both an answer to the formulated research question and a test of the different hypotheses outlined, thus contributing to the evolution of the scholarship in this field of study. At the same time, my research also sets the ground for subsequent studies that could provide valuable insights on other factors and perspectives that

escape the limits set in this study. The results that my research presents confirm the importance that complying with international standards of natural resource management has for developing resource-rich countries, not only in terms of human rights and environmental conservation but also as a way to trigger institutional reforms. This in turn would permit a much broader and deeper improvement of the entire state structure. However, it should be noted that one-size-fits-all solutions should be avoided given the fact that each country has its specific needs and characteristics, as already pointed out by the literature (Acemoglu, 2008; Rodrik, 2008). For this reason, a detailed analysis should be conducted on a case-by-case basis in order to provide specific recommendations for each resource-rich country in order to better meet the international standards for natural resource management. Once this is borne in mind, it should not be forgotten that this research has evidenced that natural resources are far from being a curse, they should be instead regarded as an opportunity for resource-rich countries to undertake the necessary reforms in their institutional architecture for achieving sustainable and inclusive development.

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