THE RESOURCE CURSE AND RENTIERISM IN A NON-OIL DEPENDENT COUNTRY: AN ASSESSMENT OF THE MEXICAN OIL SECTOR

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Abstract

This thesis aims to identify if a country that has substantial oil endowments and a diversified economy can show symptoms of the resource curse. To achieve this, seven analytical categories were elaborated based on the economic and political manifestations linked to the resource curse. These include the economic effects of the volatility of oil prices, the dominance of the oil sector over other economic sectors and indicators of a rentier state, repression and lack of modernization. Mexico is the case studied in this thesis, since it has one of the biggest oil sectors in the world and its economy is comprised of diverse economic sectors. Through historical analysis and statistical data, the results indicate the following: 1) the volatility of oil prices has had both positive and negative effects on the Mexican economy, 2) the oil sector only dominated the economy from the late 1970's to the mid 1980's and it has not limited the growth of other economic sectors, 3) There are some signals of a rentier state in Mexico, 4) Signs of government repression were prevalent from the 1960´s to the 2000´s but they have waned since, and 5) The influence of oil on the modernization of the country was not identified. In conclusion, Mexico has benefited and suffered from the socioeconomic effects of oil and it does show some mild symptoms of the resource curse. Further operationalization to identify symptoms of the resource curse should be the subject of future research.

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Introduction

Optimism can erupt when a region that has a lagging economic performance suddenly discovers that it has abundant natural resources. The momentum generated by the potential economic gains of these assets brightens the expectations for a sustainable and prosperous society. However, the enthusiasm of these prospects can be misplaced since a resource boom can also turn into liability and an impediment for the development of a society. Such a scenario can lead to what is referred to as a *resource curse*.

This concept is defined as a phenomenon where a region that has abundant resources has lower socioeconomic development in comparison to countries that lack resources (Sachs & Warner, 2001). Additionally, the effects of a resource curse can lead to rentierism (Madhavy, 1970), macroeconomic instability (Ross, 1999), authoritarianism (Jensen & Wantchekon, 2004) and the poor development of human capital (Gylfason, 2000).

A substantial amount of the literature on this subject has been devoted to study regions that have considerable hydrocarbon resource endowments, specifically oil. Oil-dependent countries tend to be the exemplary cases where the effects of a resource curse are indeed very damaging to a society. Since the extraction of oil can be a very profitable economic activity, economic and political agents try to obtain and maintain control over the oil sector at the expense of the development of a nation or the benefit of society. However, scrutiny of nations that have massive oil reserves, but not exclusively depend on this resource has not been covered at length. These cases may be overlooked due to the fact that the effects of the resource curse are not so strong or even palpable in comparison to oil-dependent countries. This divergence between oil producing

nations elevates the counterarguments that dispute the existence of a resource curse, citing that the symptoms attributed to this phenomenon are actually caused by institutions (Menaldo, 2012). On the other hand, the proponents of the resource curse focus on examining the similarities between oil-cursed nations and they disregard the differences that set them apart. Furthermore, the literature has focused primarily on studying Middle Eastern and African oil producers[1]. Therefore, I postulate the following research question: How, if at all, does a country that has substantial petroleum endowments and a diversified economy experience symptoms derived from the resource curse?

This research project aims to contribute to the understated gap by tracing the different trajectories that a high tradable resource, such as oil, might provoke and induce in contexts where this sector is not the base of the economy. To accomplish this, I propose seven analytical categories to gauge the impacts of this phenomenon in the case of a diversified economy. These analytical categories include the economic effects of oil volatility, the dominance of the oil sector over other economic sectors, the presence of a rentier state, government repression and the societal development in terms of human capital.

However, there are limitations of how to assess the economic effects of a resource curse when a country has a diversified economy as opposed to an oil dependent economy. Tracing the positive or negative effects of one economic sector in the context of a diversified economy can be difficult and imprecise. Thus, the theoretical foundations of this research are established from the Rentier State Theory, which derives from the state centered study perspective of the resource curse.

[1] See Madhavy 1970, Jensen & Wantchekon 2004 and Luciani 1987.

The state centered perspective explores how the state utilizes the proceeds from the oil sector to maintain political and economic order. The selection of this focus also stems from the fact that most of the international oil supply is extracted by state-oil companies (Hartley and Medlock, 2008). Since the 1970's, the extraction of oil has grown as an expensive enterprise and as a result more governments took control of oil assets since they could have more flexibility with ascending production costs as opposed to private companies (Ross, 2012). In the long run, the government benefits greatly from oil revenue since it can be a source of public income without having to raise taxes on citizens.

The selected case for this research is Mexico, since it is the 10th largest producer of oil worldwide, it has a diversified economy where oil only represents 11% of its total exports (Observatory of Economic Complexity, 2016) and its oil sector was fully nationalized until 2014 when the access to private oil companies was granted. Additionally, I selected this country given that Philip (1994) classified Mexico as a country that has avoided the negative effects of the resource curse and I put forward the claim that this is not the case. A relevant aspect of the Mexican oil sector is that it holds a high political value in the country. After the government expropriated the exploitation of this resource in 1938, oil became "an outlet for nationalism and a vehicle by which citizens can express their loyalty to the person and office of the president of Mexico" (Baker, 1992: 281).

Hence, the hypothesis of this research assumes that despite the fact that Mexico is a non-oil dependent country, it does have negative manifestations that are connected to the resource curse. It should be stated that this thesis does not intend to prove the prevalence of a resource curse in Mexico, but it attempts to discuss whether if there are any similarities that have been known to

predominate in a resource cursed region at the same time acknowledging that there are some symptoms that are not present in the Mexican case.

This research is divided into four parts. The first chapter provides a literature review on the resource curse, the different strands of study of this theory, the theoretical elements of the state centered perspective, rentier state theory and some critical arguments against the resource curse. The second chapter reviews the general history of the Mexican oil sector from the late 19th century to 2015, placing emphasis on the most important events that shaped the oil sector. The third chapter presents the methodological design of the seven political and economic analytical categories which were applied to evaluate the symptoms of the resource curse in Mexico, the diagnostic of each analytical category and a discussion of the findings. Lastly, the fourth chapter contains the conclusions and other observations.

Chapter 1: The State Centered Perspective of the Resource Curse and the Rentier State

1.1 Resource Curse

When abundant reserves of newly found natural resources are first exploited, rising positive prospects of economic progress incentivize the development of a region. Some of these early presumptions include increases in wages, improvements of living standards, higher overall economic activity. In addition, the government sees to benefit from higher tax revenues. However, there are also negative effects that might come from the economic activity which might hurt a region more instead of benefiting it.

Hence, if an economy relies too much on the extraction of one type of natural resource, then it might be prone to suffer from a "resource curse". Auty (1995:258) defined this as "the process by which a bountiful natural resource endowment proves a handicap to development rather than a blessing". The architecture of a resource driven economy might crowd out the other domestic counterparts and cause low profitability for the minority sectors. Under these circumstances, the economy can be in a fragile position in the event that the resource sector suffers negative reverberations.

1.1.1 Characteristics of the Resource Curse

Ross (1999) sets the examples of poor nations or regions that unearthed vast natural resources and suffered economically as a result of the volatile nature of resource driven economic growth. Humphries et. al (2007) differentiates between natural resources-led economic growth and one driven through industrialization: 1) The exploitation of natural resources may only require

their extraction and it might not require product cycle processes, 2) The development of a resource economic sector has the potential of being highly centralized, or enclaved. As result, different economic sectors get marginalized, 3) Resources are commonly non-renewable, meaning that they cannot be reproduced and eventually they become exhausted.

Other negative economic and social reverberations that can stem from the resource curse are macroeconomic instability, lagging social welfare performance, high levels of unemployment, inequality and poverty as well as ascending corruption and high incidence violent conflicts between diverse societal stratums (Rosser 2006, Karl 2007)[2]. Thus, the heavy dependence on a resource might not be as beneficial in the long run.

1.1.2 Rents

To comprehend the basic nature of the resource curse, the process of how revenue is generated from extracted resources has to be reviewed. Concretely, a resource-driven economy characterizes itself for just accumulating proceeds from "rents". The initial referents to this term place it as the obtained income by landowners when they lent their lands to other individuals.

Later, rent became linked to "the economic income generated from resource extraction" (Losman, 2010: 427). In this case, the proprietor that holds control over the resources benefits from the material endowments and might not have to make heavy investments into extracting his

[2] In contrast, an industrial led economy grows with more stability as result of a high influx of forward and backwards linkages in comparison to a resource driven economy. These linkages are cyclical investments that are made to maintain the operations of an economic sector. Industrial led sectors are characterized by elevated capital expansion, high consumption and the incorporation of various economic actors (Hirschman, 1981).

or her endowments. The reception of rents can be often exclusive to the resource sector actors while other economic actors do not benefit directly from the resource sector. Therefore, rents can be tempting incentives for rent seeking and profit seeking behaviors, which are reviewed in latter parts of this chapter. In short, rents are the main mechanism that is at the heart of how a resource sector functions.

1.2. Analytical categories of the Resource Curse

The magnitude of the effects derived from a resource curse can be analyzed from economic and political perspectives. Ross (1999) highlights this typology and adds that there are analytical streams that combine elements from both disciplines, but they have mainly focused on rational choice theory. In the following subsections, four prominent economic analytical streams by discipline are summarized.

1.2.1 Economic Analysis of the Resource Curse

The first category argues that those countries that depended on exporting very simple commodities, usually agricultural goods or products that do not require complex stages of production, suffered economic contractions after the selling prices of these commodities eventually shrank at rapid rates. This decline is attributed to the higher availability of these commodities and the rise of more complex industries, such as machinery or electronics, which also decreased the value of the simple commodities over time.

The second economic study stream investigates the unpredictability and volatility of prices that can affect the stability of the sector, which may translate into devaluation and negative growth

of a sector and the overall economic performance of a nation[3]. Additionally, the extraction costs can rise and this could generate more uncertainty around the resource sector.

The third category explores the dominance of the resource sector over other non-resource economic sectors. In this case, the resource sector seizes the scope of the economic policy agenda and debilitates the responsiveness to consolidate the development of other weaker sectors. Lastly, the phenomenon cataloged as the Dutch Disease is referred to as an event where a resource bonanza unleashes an appreciation on the national currency and causes a hike of wages nationwide that upsets the competitiveness of other economic sectors (Neary & van Wijnbergen, 1986).

Additionally, the inconsistent performance of countries that are associated with a resource curse has also hatched theories that indicate that resource-rich countries develop less than nations that are not endowed with natural assets (Sachs & Warner, 2001), although there have been some empirical disputes regarding the validity of these claims (Bulte et. al, 2005).

1.2.2 Political Analysis of the Resource Curse

In the political realm, Ross (1999) provides three explanatory frames of the resource curse. The Cognitive Explanation implies from a behaviorist approach that the actors that wield power surrounding the exploitation of the resources will act irresponsibly and will not institute a long term development plan. Policy makers are blinded by the economic boom's euphoria and this leads to the detriment of the economy. Meanwhile, the Societal Explanation presupposes that the

[3] The change of oil prices might affect the economy as a whole. This could permeate in the economic performance and the growth of GDP.

individuals that have control over the resource sector, or rent seekers[4], accumulate substantial profits which they utilize to protect their economic interests and acquire political leverage. The nature of rent seekers is to maximize their profits and it is in this process where they generate "social waste rather than public benefit" (Buchanan, 1980:47). Ross (1999) indicates that even though the state collects taxes from rent seekers, the latter can still control the political agenda of a country (312).

Thirdly, the state Centered Explanation combines aspects of the previous two categories and aggregates the institutional focus into the equation. This approach on how the state benefits from the extraction of natural resources. This scenario may lay the foundations for the formation of a rentier state, which is centered towards sustaining high public expenditure to satisfy the needs of the population while taxing them at very low levies in exchange for their political support (Rosser, 2006: 268).

Furthermore, there have been more analytical approaches that posit the resource curse as the main cause of some ethnic or social conflicts that have led to civil wars, as well as to the permanence of authoritarian regimes which are sustained by the rents that are generated by the resource sector. Ross (2001) attempts to correlate the influence of oil dependence on democracy by gauging rentierism, government repression and the modernization of a society.

Taking these approaches into consideration, the next portion of the chapter describes the state Centered Explanation perspective since the scope of this thesis focuses on a country that has a diversified economy. The initial presumptions of this research are focused towards the state, which is the entity that has a virtual monopoly over the Mexican oil sector.

[4] The original conception of Rent Seekers was elaborated by Krueger (1974).

In order to set stage for the state centered perspective, the prior establishment of the concept of state capacity has to be made to settle the theoretical foundations of a rentier state. Consequently, a societal explanation argument is made to contrast the source of the agency that can illustrate rent seeking behavior.

1.3 State centered Perspective

Intrinsically, the state has to handle diverse functions that have an intense degree of complexity depending on the prowess and dimensionality of the affairs at hand. This enterprise is so broad that it is often reduced to the category of state capacity for simplification purposes. An elementary concept of state capacity puts it as the "degree of control that state agents exercise over persons, activities, and resources within their government's territorial jurisdiction" (McAdam, Tarrow and Tilly 2001: 78). If a region has a high degree of state capacity it means that it can provide citizens with public goods, establish a strong rule of law and advocate for human development.

For thematic reasons we focus on the relationship between the state and how it accommodates and regulates economic sectors. Karl (1997) posits that the exploitation of any resource depends on the state capacity of a region, which demands conditions of strong state autonomy[5] and control over collective decisions. It is through this establishment that the state "raises revenues, provides services, exercises coercion, creates consensus, and selects and refines

[5] In this case, autonomy refers to the degree that the latter fends off the influence of the interests of the economic sectors from deeply interfering with the interests of the nation.

policies" (Karl, 1997: 45). In other words, the State must have a competent capacity to accommodate and set boundaries on the economic sectors so that the latter parties undertake economic activities prosperously.

1.3.1 Configuration of the State Capacity according to the economic sector

However, state capacity is also determined by the main characteristics of each economic sectors. Shafer (1994) proposes two prototypes of leading sectors of an economy: High/High (HH) and Low/Low (LL). The HH economic sector requires an intensified degree of capital and a complexly constructed economies of scales, while a LL sector does not involve many compounded stages of production. Although, a LL sector has more production flexibility and it is not as easily depletable as the resources that are produced or extracted. Furthermore, HH sectors usually are of a mining or a highly developed industrial nature, while the LL category applies to simple manufacturing sectors that are relatively not expensive.

The state has to attune its capacity to accommodate or regulate economic sectors depending on the mentioned characteristics. For example, a LL sector is not as profitable as its counterpart and it does not generate high flows of tax revenue, but the state can intervene in the trajectory and restructuring LL sectors.

In contrast, a HH sector can deliver high tax returns to the state. Nevertheless, the HH setting is controlled by a few firms that have high capital stock and these exert more power on the state in comparison to a LL scenario. Thus, the state does not have the full political or economic control over the HH sector, since it generates a significant economic gains for the sector and the state. The oligopolistic group of a HH sector can accumulate so much leverage over government to the point

that it could dictate the political and economic agenda of a country. This can deprave the state from exerting its autonomy to set national interests.

In the face of this threat, the state might decide to nationalize the sector in order to maintain the integrity of the country. This shift can realign the economic and state interests into a unified agenda. Otherwise, the state is prone to be seized by the owners of the HH sectors, which might lead to a "state capture".

The latter term refers to a successful takeover of the state led by businessmen or political elites so that they can increase their economic benefits and expand their political leverage over other actors, while disregarding the public interest (Grzymala-Busse, 2008). Once this takeover is complete, the capturing agents have to perpetuate their dominance by maintaining the productivity of economic sectors or keeping political cohesion throughout society.

One viable path of sustaining the capture of a state is if the region has vast natural resource endowments, which are appropriated by the capturers to sustain their hegemony. These are the fundamental parameters for the surge of a rentier state, which are explored in the next section.

1.3.2 Rentier State

The original conception of a Rentier State was developed by Madhavy (1970) when he studied relation between the national Iranian oil industry and how the rents influenced citizens to comply with the government's rhetoric. Karl (2007: 2) defines the rentier state as a political entity that "survives from externally generated rents rather than the surplus production of the population". A rentier state can possess the following attributes:

a) The profitability of the resource sector must be enough to satisfy the pecuniary necessities of the economic sector and the political needs of the state and the population. If the state is not able to satisfy these, then it might lose political and economic leverage (Benli 2014, Karl 2007).
b) Resource rents finance public expenditure. Since the state is the direct receptor of rents, it reallocates the proceeds towards social welfare programs, infrastructure, public employment and other government projects (Rosser, 2006: 268).
c) Considering that a great percentage of public expenditure derives from rents, the state can apply relatively low tax levies on the population.
d) The salience of political issues might be low as long as the primary necessities of the population are fulfilled. Under these conditions, individuals are discouraged from participating in the civil society arena taken that the clientelistic network keeps operating.
e) Inefficient policies and corruption can loom in the bureaucratic structures as long as there is high availability of resources at the disposal of the policy makers.
f) The authorities adopt protectionist policies to avoid Dutch Disease related symptoms. Additionally, policymakers vow to allocate rent proceeds to finance other non-resource to diversify the economy, but these operations can often be inefficient (Auty & Gelb, 2001).

These are characteristics have been associated with the archetype of a rentier state of during its first theoretical wave, but there have been reformulations that have tried to improve the theoretical template of this concept.

1.3.3 Evolution of Rentier State Theory (RST)

One of the main issues that surfaced with the first wave of Rentier State Theory (RST) stems on the fact that its explanations were too simple. Some studies have relied heavily on statistical regression analyses and disregarded any other economic, political or cultural historical roots that could have provoked symptoms associated with the resource curse. The first wave of RST was fixated on predicting the predisposed trajectory of countries that resembled rentier states, while ignoring the differences between countries with rentier characteristics (Benli, 2014).

Secondarily, the first generation of RST did not elaborate on the fallout of the oil booms and busts and how these events reconfigured the political configuration of scrutinized countries. Thirdly, theoreticians took for granted that the state had complete power over the population, while ignoring the population's agency in these scenarios. The responsiveness level of the authorities towards the population´s needs was overlooked and by proxy a lot of other influences of policy making in rentier states were left out. Lastly, outside of the authoritarian trait of the rentier state, other political aspects were not studied thoroughly such as party systems, the lack or presence of democratic regimes and electoral systems (Grey, 2011).

The second wave of the RST addressed the latter issues by incorporating historical factors, economic cycles, taxation trends, non-oil related economic policies, political characteristics of the regime, historical antecedents of the state and the role of agency in rentier state studies (Grey, 2011). Subsequent adaptations of RST include Conditional RST and Late Rentierism. The first theory posits that the state does not wield complete power over the population, so the latter has influenced some of the policies that are instated in a Rentier State. Late Rentierism tracks changes that national oil companies have had to enforce as a result of the requirements demanded by globalization.

In brief, RST has kept evolving by including different elements that were not scrutinized in the first generation of this theory, but nevertheless there are still lingering issues related with the causality explanations of the poor democratic and economic performance of resource dependent countries. In the next section, a counterargument from the Societal Explanation angle is made in regards to RST.

1.3.4 Criticisms of RST and the State centered perspective

A debate surfaces from the following question: Who holds control in a region that suffers from the resource curse, the rent seekers or the state? On one spectrum, a rent seeking elite gains the control of the government through state capture and the state is attuned to satisfy their profit seeking interests. In the adverse scenario, the State is the hegemonic structure that fends off different actors from dictating the interests of the nation. Hence, it is unclear which party dominates the landscape.

The societal explanation specifically states that the profit maximizing elite try to maintain and expand their gains through unproductive and expropriative activities that do not benefit society (Krueger, 1974). These rent seekers compete against each other by resorting to legal mechanisms and illegal activities, such as bribery and corruption, to gain more profits from the accumulated rents. Once the government acquires a new source of revenue, usually from the exploitation of resources through a state company, then the political elites square against each other to obtain the highest financial gain possible. Torvik (2002) states that the bigger the abundance of natural resources is, the more encouragement rent seekers will have to engage in predatory behavior.

Once the actors seize the accumulation of rents, they resort to allocating some of these returns and other public funds through government expenditure to dampen the tension that might rise between competing elitist covenants and citizens. This type of spending can be categorized as social waste since it hardly contributes to generate positive economic growth (Robinson et al., 2002).

In summary, there are some valid points are highlighted by the societal explanation in regards to whom steers the government, since it pursues to identify the actors that gain access to power and how they influence policymaking. Although there are some issues with this approach due to its rational choice perspective of individuals as profit maximizers. This focus leaves out the societal factors that might explain the behavior of actors. Additionally, Pasour (1987) illustrates that it might be very complex differentiating between spending that can be categorized as pro-economic growth and as social waste. The next section goes over the specific traits that are embedded in an oil curse.

1.4 Oil Curse

Oil is the resource that gets tied most often to the resource curse and RST. Karl (2007) states that oil has unique attributes that differentiate it from other commodities when it comes to the study of the resource curse. In the economic dimension, oil is a highly traded depletable commodity which has inconsistent availability, it requires high-capital intensity and has a high price volatility. On the political spectrum, oil can represent an icon for national sovereignty, a strategic military commodity and a monolith of national progress.

As for the accumulation of rents, the yield of oil profits depends on the geographical conditions where the oil industry has to extract the hydrocarbons. If the extraction costs are high,

then the profits are reduced. Oil extraction, in general, is a very daunting and expensive enterprise which can only be undertaken by powerful oil companies or state governments.

1.4.1 The implications of the oil sector's ownership

There are only two players that have the clout to carry an oil sector: a reduced number of highly capitalized private companies or the state. At first glance, the state might allow private companies, usually foreign owned, to exploit oil in their territory as long as they pay elevated taxes and take enough distance from directly influencing the political agenda for their own benefit. As time might go on, the state might feel menaced by the private oil companies since the latter can gain substantial political leverage over the former. The state capacity in this case closely resembles a HH setting (Schafer, 1994). Thus, the government might feel the obligation to nationalize the oil industry in order to keep the national agenda unsullied from foreign actors and to redistribute the proceeds of the rents to its citizens.

Both National Oil Companies (NOC's) and International Oil Companies (IOC's) seek to gain profits through the extraction of oil, but they are very different when it comes to their substance and scope. Hartley and Medlock (2008) posit that IOC´s and NOC´s serve the role of the agent, but that the principal in the case of IOC´s are company stakeholders and the state (including the population) in the NOC setting. IOC's are designed to gain profits, reinvest heavily in drilling operations and redistribute the net financial gains among the stakeholders. IOC's have to maintain tight efficiency benchmarks to uphold competitiveness. The modus operandi of NOC's prioritizes the allocation of the rents towards public expenditure above the company's reinvestment necessities, which leads to the possible downgrading of efficiency standards. By default, NOC´s have more difficulty in trying to balance the sustainability of their operations as a

result of the high political stakes that are embedded in this scheme. It could be argued that IOC´s are more efficient than NOC´s, but empirical evidence points that the difference of efficiency is not that dramatic and that NOC´s have started to adopt more efficiency benchmarks (Wolf 2009, Grey 2011 & Hertog 2010). Furthermore, if the extent of the abundance of oil is highly significant for the country, then it could fall in the category of becoming a "petro-state": a country that relies entirely on the extraction of this commodity (Karl, 1997:16).

In summary, the state might have the urge to take over the oil sector on the pretenses of social welfare for the citizens and as a failsafe mechanism that will deter any attempts of state capture from private companies. Although, the substance of a national oil industry can be hard to maintain since it has to balance the redistribution of oil income towards public expenditure and reinvestment in extraction operations.

In the final section of this chapter, I review some of the theoretical arguments that challenge the existence of a resource curse opting to explain that the root of the problems connected to the resource curse stem from other factors, mainly institutions.

1.5 Defiance of the existence of the Resource Curse

Some scholars have argued that the existence of a resource course is just a mirage, citing that the institutions are the inception point where inefficiency patterns and rent seeking conducts reproduce exponentially within the state and throughout society. Trends of corruption and clientelism might have existed before the discovery and exploitation of the resource. Karl (2007:18) explains that the symptoms related to the oil curse are caused by low state capacity and deficient institutions. In the same vein, Menaldo (2012) details that a country with low state capacity will try to extract more oil rents if the authorities acknowledge the existence of

unexploited resource reserves, which will fuel the prolongation of the institutional ineffectiveness. Other arguments posit that the state would stave off the predominance of patronage networks and corruption if the oil sector was privatized (Luong & Weinthal, 2001) and that the abundance of natural resources is not a deterrent that provokes ineffectiveness in state, but rather the structural characteristics of an economy (Torvik, 2001).

There are discourses that postulate that resources are not a curse, but rather a blessing. For instance, Menaldo (2015) details that resource booms have provided developing nations the necessary material stimulus for them to nurture democracy, strengthen state capacity, improve living conditions and improve taxation. The inflow of resource booms in some cases has benefited countries by providing capital accumulations that eventually led to economic policies which have been successful in the diversification of their economies.

Overall, the debate regarding the cause of the defective performance of countries that possess vast natural resource endowments has kept going between the advocates of the resource curse and the proponents of the institutional explanation strand. Regardless of this, the study of natural endowments has kept progressing by adding different analytical aspects that enrich the study of this phenomenon. The next chapter presents the historic case of oil in Mexico and how this sector has evolved since it sprawled.

Chapter 2: Oil in Mexico

This chapter goes over the history of the Mexican oil industry in four distinctive epochs. The first historical period spans from the discovery of oil in the 19th century to the oil expropriation orchestrated by President Lázaro Cárdenas in 1938. The second epoch covers the initial challenges that the oil industry had to face in terms of exogenous pressures and the structural galvanization of the national oil company, Petróleos de México (Pemex). The third section details the oil boom era, where the exports of Mexican crude oil began to be the primary priority of Pemex. Lastly, I refer to the beginning of the fourth epoch of Mexican oil, which is characterized by a partial denationalization of the oil sector. Finally, I go over a historical summary of the four previous sections.

2.1 1860 – 1938: The Emergence of Oil in Mexico

The first evidences of oil reserves in Mexico were spotted predominantly in the southeastern regions of the country. In 1863, merchants from the state of Tabasco realized the economic potential of selling crude oil – at the time used for lamps and other types of lighting – to the United States (Álvarez, 2006: 16).

However, while oil drilling operations were not that extensive during the remainder of the 19th century, the oil imports were entering the country at a fast pace. The demand for lamp oil and other oil-based products rose rapidly as the country started to develop extensive economic infrastructure. The suppliers of oil for Mexico were American oil companies like Standard Oil and St. Louis Waters. Brown (1992:5) highlights that President Porfirio Díaz paid close attention to the movements of incoming oil enterprisers that wanted to initiate a massive scale oil industry in

Mexico. Díaz was an advocate for private enterprise and he granted wide property rights for exploitation to the proprietors who would acquire Mexican land, but he had some reservations with the American entrepreneurs because he viewed them with suspicion and as a threat to national interests. As a consequence, British and Dutch companies were more favored by the executive power. The main beneficiary of this arrangement was Sir Weetman Pearson, who founded "El Aguila", the most important oil company operating in Mexico at the time (Brown, 1992: 6).

The second decade of the 20th century was marked by the end of the Díaz government along with the shattering of the oil monopoly controlled by El Aguila and the ascendance of domestic oil production. The exit of the long standing president provoked a revolution in Mexico, which meant that the oil market was open for more American players. The Huasteca Company, an American company, led an effective effort to acquire more market share during the period of exploitation bonanza of the 1910´s. Uthoff (2010:9) explains that by this time, 90% of the oil exploitation market was controlled by the oligopoly of the Huasteca Company and El Aguila. Mexico ceased to import oil and soon became the second biggest worldwide producer of this commodity. The oil companies soon began exporting and netted huge profits from 1918 until 1922.

As a response, the government set up laws which stated in its 27th Article that private actors were entitled to property rights to exploit under Mexican land[6] and began taxing the sales of oil exports by 1921. However, Article 27 contained a clause which stated that the Nation could expropriate oil producer's lands at any time (Uthoff, 2010: 13).

[6] The Constitution was clear that the government could take over some control of the exploitation of land, but did not enforce this clause because the government opted to let the private companies to do as they will. This left uncertainty on whether the property rights could be stripped away from the foreign oil companies and this dispute dragged on for 21 years.

After this period of success, the oil industry plunged after price devaluation and the expansion of oil exploitation in other regions in the world. The production of oil in Mexico decreased from 1923 to 1933 and the oil companies decided to focus their enterprises on satisfying the domestic demands of oil as their main market strategy. The most consumed products at the time included fuel for trains, lubricants, gasoline, kerosene and asphalt (Uthoff, 2010: 16). The oil refinement industry was the main engine that kept the oil sector profitable during the 1920´s. This was not enough to solve the decaying financial situation of the Huasteca and El Aguila. Consequently, these two corporations were acquired by Standard Oil and Royal Shell respectively (Brown, 1992: 16).

Brown (1992: 14) details that the Mexican labor force was slowly integrated into the oil sector, including disenfranchised sectors of society that lost their jobs during the clashes of the revolution. However, the foreign companies did not seek to give fair remuneration to Mexican workers as they became highly disposable in the eyes of the administrators. Oil companies initially brought in specialists from outside of Mexico, paid them better salaries and provided better accommodations for them.

Notwithstanding, the government and the Mexican workers retaliated against the oil industry. Due to the fact that oil corporations found themselves in a weak position during the 1920's, Mexican oil workers started channeling their economic grievances by halting activities of some refining plants. Their attempts to form unions were successful, but they were not effective because they were scattered and did not unify as one collective organization. The foreign oil emporium staved off these internal pressures though they encountered more difficulties while dealing with the federal government. In 1925, President Calles enacted the clause of Article 27 where the foreign oil companies could only exploit natural resources by acquiring government

concessions. The informal agreement between the authorities and the oil cartel was breached because President Calles wanted to get more rents from the oil emporium. Three years later, the American ambassador acted on behalf of the oil companies and together with Calles came to an agreement that oil companies would not be eligible to hold property rights on Mexican land for resource extraction (Brown, 1992: 16-22).

The Mexican oil industry generated positive momentum going into the 1930's due to the recovery of productivity of the oil companies, the sustained enhancement of the oil refining industry and the surging demand for fuels and lubricants (Uthoff, 2010: 17). Despite of the oil companies' successes, the government and national unions collaborated intensively as both actors sought to acquire more benefits from the oil sector (Brown, 1992: 26). The government wanted to decrease combustible prices set by companies and tax the oil sector more heavily (Uthoff, 2010: 26). On the other hand, the worker's unions were consolidating throughout the nation and this brought them together with the government to commence a corporatist relationship.

Knight (1992: 92) posits that the foreign oil companies suspected that the government might try to nationalize the oil industry. This fear materialized in December 1935 when the oil industry unions gathered under one banner and formed the National Union of Oil Workers[7]. This covenant engaged in strenuous labor disputes with the oil companies as they sued the companies for better salaries in the light that the corporations were netting colossal profits. The disputes culminated in an investigation by the Federal Conciliation and Arbitration Board[8] that concluded that the unions were entitled to 26 million pesos to pay off the worker's damages as a result of a

[7] In Spanish: Sindicato de Trabajadores Petroleros de la República Mexicana.
[8] In Spanish: Junta Federal de Conciliación y Arbitraje.

12-day strike. Relentlessly, the oil cartel refused to pay these fines and by this point President Lázaro Cárdenas stepped in to negotiate with the heads of the companies. Both parties could not reach an agreement and Cárdenas opted to nationalize the oil industry on the 18th of March of 1938. This drastic change was met with a positive reception as Mexico was seen to have recovered its natural resources from the foreigners. This event would blemish the end of the foreign hegemony of the Mexican oil sector (Álvarez, 2006).

The first epoch of oil in Mexico initiated with a dependency on foreign oil which eventually paved the way for the consolidation of one of the strongest oil exporting industries in the world by the dusk of the second decade of the 20th century. The 1920's brought a lot of changes for the Mexican oil sector due to its languishing productivity and the departure from the export-oriented model to a domestic driven consumption scheme. By the 1930's Mexico became the 8th largest consumer of oil thanks to the improvements of the refining and secondary oil industry. In 1921, only 38% of the entire oil output was refined in Mexico; by 1937 the percentage rose to 97% (Uthoff, 2010:15). Additionally, production of oil grew from 34 million to 46 million barrels produced yearly between 1933 and 1937 (Álvarez, 2006:71).

2.2 1938 – 1973: Establishment of an Autonomous Mexican Oil Industry

Shortly after Cárdenas successful nationalization, the consolidation of Pemex was completed. As an immediate response, the governments of the United States, Great Britain and the Netherlands united and retaliated against the expropriation by setting up a trading embargo that limited the entry of pivotal resources that were required to sustain the petrochemical industry (Barbosa, 1992). The Mexican government entered grueling negotiations to set up the economic compensation to the foreign oil companies with slow success. The damages to American

companies totaled 450 million dollars and 250 million dollars for British and Dutch enterprises (Herzog, 1989: 55). The authorities had no other choice but to pay these debts through installments. The pressure from the US wore off by 1939 when a payment of 21 million dollars was made. After this payment, the US resumed purchasing Mexican crude oil barrels and the embargo was lifted (Knight, 1992: 119).

The 1940's featured sluggish slumps for the Mexican oil sector since it lacked the infrastructure or the capital to sustain successful and profitable oil ventures. The administrative complications permeated the first years of Pemex's operations due to the logistical, labor and material complications (Adler, 1992: 148). The dire macroeconomic state of the economy also limited the government's options on how to invest money into Pemex without having to resort to the central bank (Randall, 1989: 165). Nevertheless, the world demand for oil increased as the result of the outbreak of the Second World War. Mexican oil was exported to the U.S. and other allied countries. Productivity eventually decelerated by 1944 when Mexico exported only 655 thousand barrels when in comparison it sold 7.5 million barrels three years earlier[9] (INEGI, 2016). Cano (1992) explains that Pemex's performance in its first decade was plagued by administrative problems, scarcity of investment, the temporary closing of extraction operations in the southeast and northeast refineries and low yield of oil extraction.

The oil sector gradually recovered by the 1950's when President Alemán established a new national economic strategy modulated under an Import Substitution Industrialization (ISI) model. This economic model increased tariff rates, expanded its manufacturing at a sustained rate and

[9] Cano (1992: 203) mentions that this decrease in productivity was caused by the entry of necessary technology to drill petroleum, which some nations blocked as a result of the expropriation of the previous decade.

featured a medium sized export sector which amounted only to 20% of GDP for the so-called *Mexican Miracle*[10] period (1958-1970). Within this period, the economy grew annually on average at 6.24% of GDP (INEGI, 2016).

To achieve this, Alemán turned to oil to infuse the manufacturing sector with cheap combustibles and other petroleum based products. Additionally, the price of gasoline was frozen to bolster internal consumption. On the other hand, the extraction operations of Pemex came into fruition after the company underwent a structural unification. By this juncture, Pemex had accumulated considerable reserves of oil drums, which gave financial leverage for future ventures and this helped position oil as the third most important industry of the country (Morales, 1992a).

Morales (1992b) indicates that reinvestment towards exploration and extraction operations diminished to the point that the productivity of the oil sector waned down by the beginning of the 1960's. This culminated in a crisis of self-sufficiency, meaning that the Mexican oil sector could not satisfy the demand of the domestic market. One of the main issues within this period of scarce productivity was that Pemex did not have the technical infrastructure to explore and exploit geographically challenging oil wells. This culminated in the temporary suspension of oil exportation from 1966 until 1973[11] and the entry of oil crude imports into the country, which enraged politicians and Pemex's directors since the negative burden of the state company's trade balance increased. In addition to this, Pemex was operating at a loss since it had to deal with

[10] In Spanish: El Milagro Mexicano

[11] The declining state of the Mexican oil sector extended all the way to 1973 since Pemex had to resort to foreign oil companies to acquire 47,769,000 barrels of oil just to meet internal demand (Morales, 1992b: 247).

onerous foreign debt payments, the rise of operational costs and the hiring of more unionized personnel (Morales, 1992: 233-250).

2.3 1974 – 2014: "Big oil Era": Bonanza, Rentierism and the eventual deterioration of Pemex

The first four years of the 1970's were sluggish for the oil sector. By 1973, it only represented 0.3% of the GDP and its contribution to the federal government budget amounted to only 2.2% (Colmenares, 2008: 56). This trend was reversed in 1974 as the *Reforma* oil fields[12] started yielding more barrels of crude oil. For the first time since 1912, the extraction of oil in Mexico exceeded 193.3 million barrels produced in a year and this was in large part to the yield of the oil that was being extracted from the southeastern basin (Álvarez, 2006: 117).

The positive landscape of Mexican oil production coincided with the oil embargo expedited by the Organization of the Petroleum Exporting Countries (OPEC) to cut off the United States from this coveted resource. The price of oil increased significantly and the US suddenly sought to acquire Mexican crude oil to meet its internal demand. Pemex's executive board, along with the executive power, seized the opportunity to capitalize from this global oil draught and modified the company's production orientation. The new priority of Pemex would be to export crude to the hungry oil markets, instead of further developing its petrochemical capabilities to meet domestic demand.

[12] The *Reforma* oil fields are located in the State of Chiapas; it was the most productive oil well from 1973 to 1982 (Álvarez, 2006: 116).

The Campeche region continued to produce oil at a vigorous pace during the 1970's. By 1978, it accounted for 78% of the entire oil production (Álvarez, 2006: 117). This influenced President Lopéz Portillo to attain external resources to double the oil output and to build a pipeline all the way to the United States. The latter proposition was met with disapproval from the political elite because it posed a threat to the integrity of oil sector through foreign influence. The momentum carried stridently into the 1980's as the prices of oil kept rising and the newly built *Cantarell* complex[13] started to operate with great efficiency rates. The year 1982 marked the pinnacle of Mexican oil since 75% of the value of total national exports came from oil (INEGI, 2016) and Mexico became the fourth biggest oil producer in the world (Romo, 2015:143).

However, the celebration of this resource windfall was quickly overshadowed by the Mexico's foreign debt default that same year. During the 1970's, foreign investors took notice of the Mexican oil industry's success and they lent an elevated amount of credits to the Mexican government on the promise that the government would pay with the future gains of the oil sector. The interest rates of the debts climbed rapidly as the Federal Reserve of the United States fought off stagflation in the late 1970's. Subsequently, debt payments in 1982 represented 91.57% of that year's GDP, which was a debt charge that the state could not fulfill immediately. Shortly after, Mexico declared a sovereign default and a staggering devaluation of the Mexican Peso ensued (Sandoval, 2011).

Government officials scrambled to regain the macroeconomic control of the country by utilizing the income generated by the oil rents to pay for public expenditure or to make debt

[13] The *Cantarell* oil field has been the most productive oil well in the history of Mexico. It is located in the state of Campeche. Only a year after it began operations, the *Cantarell* oil field produced 1.6 million barrels of oil daily (Romo, 2015:144).

payments. By 1983, the legislature elevated the rates on Value Added Tax (on oil and gas) and the Tax on Oil Sales. With that modification in place, oil went from contributing 16% of the entire federal budget in 1981 to 43% by 1983 (Romo, 2010: 417-444). As a result, Pemex had extensive budgetary cuts that reduced the exploration of potential wells and deepened the declining refining capacity by 3.2% in the 1980's in comparison to the previous decade (Álvarez, 2006: 141).

Nevertheless, extraction of crude oil continued to grow during the 1980's at increased rates. Crude oil exports in 1983 amounted to approximately 534 million barrels, but the profits of these oil sales waned as the world prices of this hydrocarbon plummeted when the members of OPEC flooded the oil market[14]. Nonetheless, the Mexican government accumulated 110 billion dollars in oil export revenues from 1975 to 1987 (Székely, 1992: 256). These revenues funded public expenditure and the funds to remediate two economic crises and payments for the damages provoked by the 1985 earthquake that struck the Mexican capital (Cárdenas, 2009:51).

During the economic turmoil of the 1980's, policymakers engineered structural reforms according to the Washington Consensus in order to link Mexico with the global economy. This structural change included the elimination of tariffs, the auction of public assets and the denationalization of the banking sector (Muñoz, 2004). In spite of this liberalization wave, Pemex remained a state owned company.

However, Cárdenas (2009:49-52) indicates that the government wanted to slowly liberalize the oil sector. President Salinas enforced notable structural changes that opened the door for private actors to participate in the Mexican oil industry during his 1989 – 1994 term. First, he downgraded

[14] The price for an oil barrel produced in the Campeche region decreased 30% in 1986 when compared to the 1980 price (Álvarez, 2006: 137).

wages for unionized Pemex´s workers. Secondly, the executive power introduced a new organic law for Pemex which separated the company into four decentralized divisions[15] to give more financial liberties to the oil sector. These circumstances set the precedent for the 1995 deregulation of the petrochemical and the emerging natural gas demands, which now allowed Pemex to concentrate its operations towards crude extraction to decrease the allocation of capital to the refining sectors (Reyes, 2014).

In the production category, Pemex kept incrementing the extraction of crude oil, largely in part due to the drilling expansion of the *Cantarell* field. By this decade, Pemex allotted oil in equal proportions for the domestic and foreign demand as opposed to the export-driven model of the 1980's. By 1995, the annual production of oil oscillated around 955 million barrels; 49% of the extracted oil was eventually exported (Álvarez, 2006: 145). Aside from being dispensed towards the federal budget, the proceeds from the sales of oil played a pivotal role when the country underwent another economic crisis in 1994. The Mexican government negotiated with the International Monetary Fund and the United States to acquire a 50 billion-dollar bailout package to reestablish the Peso's stability under the conditions that the creditor nation would pay off the debt with oil income. Fortunately for Mexico, 1996 was a very profitable year for the Mexican oil industry and this partially alleviated the pressure from the biggest bailout package ever granted to that date (Cárdenas, 2009: 51).

Another reform was undertaken during the Zedillo presidential administration, where a new state financing scheme was instituted which prevented Pemex from exercising capital

[15] The partition set apart the subdivisions in the following way: Exploration and Production Division; Petrochemical Division; Refining Division and the Gas and Petrochemical Division (Álvarez, 2006: 149-51).

ventures autonomously. Through the *Pidiregas* investment system, the federal government would grant private companies partial control over Pemex's projects (Romo, 2015:146).

The 2000's ushered in more changes to the legal framework of Pemex along with periods of volatile profitability for the oil sector, largely in part to the intensified exploitation of the *Cantarell* field. Two major reforms were introduced that sought to gradually incorporate foreign companies in the exploration and drilling operation within Mexico without having to share the profits that would be extracted from the national resources. The first one created the Multiple Services Contracts[16], a mechanism that allowed Pemex to hire foreign private companies to search for and produce natural gas (Cárdenas, 2009: 52). The second reform of oil opened the gates for other private companies to undertake deep aquatic exploration and drilling due to the fact that Pemex did not have the necessary infrastructure to carry out these tasks as a consequence of its undercapitalization. This measure was adopted in direct response to the output decline of the *Cantarell* complex ever since it reached its production peak in December 2003 when it processed 2.2 million barrels of oil per day (Reyes, 2015: 147). Ever since then, the yield of this oil field has kept going down.

Although production of oil shrank from 2004 to 2013 approximately by 1 million barrels per day (Pemex, 2013), exports generated a lot of revenues for Pemex due to the steady hike in oil crude prices (De la Fuente, 2013: 16). From 2003 to 2014[17], the prices of each barrel of oil went from 40 dollars to 120 dollars (BP, 2016). While the exports department thrived, the domestic supply of oil and oil based products continued to deteriorate. Because Pemex's refining division

[16] In Spanish: Contratos de Usos Múltiples.
[17] 2009 was the exception because prices of oil collapsed.

has been underfunded for the last three decades, the capacity of the company has not been able to meet the rising domestic demand for gasoline and other oil based products. The company has had no other choice but to import these products at an increasing pace (Pemex, 2013). This reinvestment void has contributed to the dire financial situation of Pemex, which has operated at a loss since 1998 and by 2015 it accumulated a deficit equal to 3% of the GDP generated the prior year (Cota & Catan, 2015).

2.4 2013 – Present: The end of the state monopoly era

The decaying state of the Mexican oil sector ultimately culminated in the introduction of an energy reform in 2013 that terminated the monopoly of Pemex as the sole controlling entity in the Mexican oil sector. Starting from 2014, private oil companies were eligible to participate with Pemex in the exploration, drilling and selling operations of crude oil as long as Pemex remains the majority stakeholder of these ventures. Pemex aims to recover the productivity levels that it once sustained and to increase the extraction of natural gas in the coming future. More uncertainty looms in regards of how the government plans to continue financing public expenditure if it splits up the profits with private corporations and how much the policy makers are willing to reinvest in the company (Cota & Catan, 2015).[18]. The early results of this policy reform have not been very encouraging due to the low prices of oil and the hesitance of foreign oil companies to collaborate with Pemex.

[18] Shields (2006) suggested that Pemex would have to invest 50 billion dollars in exploration and 200 billion in development of the company in a 10-year period in order to improve the financial stability of the company.

2.5 Historical summary

In general, there have been a lot of shifts during the history of the Mexican oil sector. In the beginning, it was dominated by foreign oil companies that first tried to profit from the Mexican market by importing oil-based products until they eventually realized that Mexico had vast oil reserves. The oil cartel did have some power over the government, but Brown (1992:26) points out that they could not get enough leverage on the state to secure their economic interest in the long run. The entrepreneurs could only influence a number of policymakers, but they were not able to capture the state. On the contrary, they were frightened that the government would strip away their exploitation rights or nationalize the oil industry at any moment. These threats eventually solidified when the government expropriated the oil sector on the pretenses that the corporations were overexploiting the Mexican workers and they imposed high prices on combustibles.

The first era of a nationalized oil sector was plagued with technical and financial challenges. It took more than 12 years after the expropriation to stabilize the administrative structure of Pemex. After this consolidation, Pemex became integral element for the continuous strengthening of the economy during the *Mexican Miracle* period, where the country adopted an Import Substitution Industrialization model. Nevertheless, the oil sector had struggles in the 1960´s as a result of the incapability to satisfy the domestic market's demand and Pemex's dwindling refining capacity.

The self-sufficiency crisis ended as the southern eastern basin oil fields started extracting considerable amounts of oil. The change towards exportation of crude was the turning point where the oil sector became the most important economic activity from 1974 to 1986. Nonetheless, economic crises and other circumstances forced the government to use the oil rents to finance

public expenditure and pay the severance of foreign debt. Hence, Pemex's investment towards exploration and drilling decreased at a constant rate.

By the 1990´s, the economy continued to diversify as the result of the liberalization reforms of the previous decade. Even though the oil sector was still controlled by the public sector, the executive power enforced structural changes that divided the company and introduced a new scheme for investment projects where private companies entered the frame as contractors. Consequent oil sector reforms were made in the 2000's as the company's extraction capabilities did not have the technical infrastructure to drill new oil wells. Oil productivity went up during this decade, but by 2004 the most important oil fields began to dry out. As a result of the dire financial state of Pemex, the government had no other choice but to partially denationalize the oil sector in order to regain high output levels by exploring new deep oil pockets in joint ventures with foreign private oil companies.

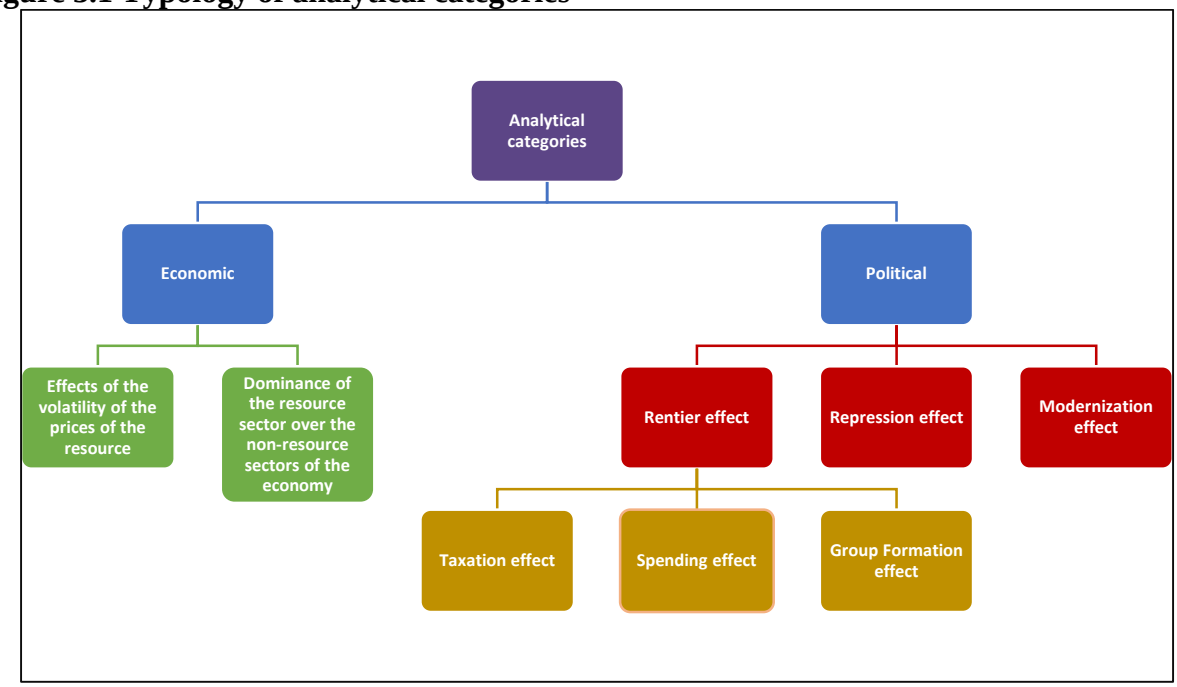
In the next section, I introduce the methodology that was used for this thesis, the results of the analytical categories to gauge the symptoms of the resource curse and a discussion section that summarizes the findings.

Chapter 3: Methodology and Analysis

3.1 Methodology

This thesis utilizes seven analytical categories to examine if Mexico displays any symptoms of the resource curse. There are two main groupings of analytical categories: Economic and Political. Figure 3.1 shows which analytical categories belong to each classification.

Figure 3.1 Typology of analytical categories



Source: Own elaboration

On one hand, the analytical categories of the Economic classification are based on the four analytical strands which were presented in Section 2.1 of Chapter 1: *Effects of the volatility of the prices of the resource, Dominance of the resource sector over the non-resource sectors of the economy, Dependency on simple commodities* and *the Dutch disease*. However, the latter two were

not employed since oil cannot be classified as a simple commodity[19] and it is difficult to trace the wage hikes and the loss of competitiveness that can be attributed to oil since Mexico has a diversified economy. Henceforth, the following two analytical categories were studied from a historical perspective along with statistical data:

1) Effects of the volatility of the prices of oil: Analyze if the volatility of oil prices has affected positively or negatively the Mexican economy.
2) Dominance of the oil sector over the non-oil sectors of the economy[20]: Determine if the oil sector limited the growth of other sectors of the economy. Usually, the oil sector limits the growth of other economic sectors in countries that are diagnosed with an oil curse (Ross, 1999).

On the other hand, there are five analytical categories that derive from the political spectrum, which were proposed by Ross (2001) to measure the effects of the resource curse on democracies. The original framework used a statistical regression to demonstrate the relationship between oil and other variables. Since this thesis only deals with one country, I adapted Ross's indicators into analytical categories by taking the original indicator and aggregated a historical description of the analytical category along with other relevant indicators. The following are the analytical categories that measure the effects of the resource curse in a political dimension:

[19] Simple commodities refer to agricultural and cheap goods. Oil is currently the most traded natural resource worldwide (Karl, 1997).
[20] This indicator does not cover the 1938-1969 period since there is no accurate information of exports and due to the fact that Mexico had a strong Import Substitution economic model from 1953 to 1970.

3) The Taxation Effect[21] (Original indicator: share percentage of public income that is financed by oil revenues): It measures if the oil rents finance a high percentage of public income. If oil does contribute substantially to a country's federal budget, then it is more likely that it will implement low tax levies on the population. Ultimately, this can lead to less representation for the population since the authorities meet their basic demands in exchange for their compliance.
4) The Spending Effect (Original indicator: Government spending on administrative expenses in terms of GDP): If the government shows ascending trends of increasing spending towards personnel and other administrative functions, then this incentivizes corruption and reinforces patronages.
5) The Group Formation Effect (Original indicator: Size of the Government in terms of GDP): If the government has a sizable dimension (in terms of GDP percentage), then non-state groups or civic associations have lesser chances to gain voice or representation in a country.
6) The Repression Effect (Original indicator: Military spending in terms of GDP): The hypothesis of this category suggests that if the government keeps increasing the military budget, then it represses the population in order to maintain the longevity of the regime.
7) The Modernization Effect (Ross utilizes 11 indicators ranging from the accessibility to television and radio ownership as well as graduation rates at secondary and tertiary levels of education): The premise states that a higher reliance on oil might translate into sluggish educational performance, low accessibility to media (TV, Radio or Internet) and limited permissiveness to foreign actors through globalization. In time, this might diminish the future development of human capital in oil producing countries.

[21] The Taxation, Spending and Group Formation Effects form part of the Rentier Effect.

It should be noted that this is not an ideal operationalization that gauges the symptoms of the resource curse. In fact, this research project took some economic analytical streams of the resource curse, as well as Ross's (2001) indicators from his regression analysis, to modulate a list of symptoms that might be caused by the resource curse. There are a lot of limitations when it comes to measuring the economic symptoms of the resource curse in a country that has a diversified economy, especially since oil has had a lower role in the Mexican economy since the late 1980s. As for the political analytical categories, Ross's (2001) indicators were modified significantly to try to adapt them into a case study of a non-oil dependent country. There were advantages in terms of the availability of information from Mexico, its public sector and oil statistics[22]. Nevertheless, it is still difficult to track how exactly the government allocates the proceeds from oil.

In synthesis, there are not a lot of clear-cut indicators that measure the symptoms of the resource curse and thus I proceeded to generate a homologation of relevant categories or indicators which could be used to assess the symptoms of the resource curse in a non-oil dependent country. The main sources for the quantitative part of this come from the historical databanks of the Mexican National Bureau of Statistics (INEGI), the Mexican Secretary of Finance (SHCP), the Bank of Mexico (Banxico), Uthoff's historical oil rents statistics from 1914 to 1937, annual statistical reports from the President's office, Pemex's yearly financial annals, the World Governance Index developed by the World Bank, the International Monetary Fund's (IMF) Export Diversification Index, the British Petroleum (BP) Statistical Review of World Energy of 2015, military statistics elaborated by the Stockholm International Peace Research Institute (SIPRI),

[22] According to the Revenue Watch Index (2016), Mexico is the 4th nation out of 41 countries with the best track record in regards to their transparency to their natural resource extraction operations.

public sector and education data amassed by the Organization for Economic Cooperation and Development (OECD), working papers by the Mexican Center of Public Finance Studies (CEFP) and Freedom House's Indexes on political rights and civil liberties.

3.2 Analysis

3.2.1 Effects of the volatility of the prices of oil

The volatility of oil prices has had both positive and negative effects on Mexico at different historical junctures, but the substantial role of oil in the Mexican economy was stagnant for consecutive decades. As it was noted in Chapter 2, Mexico stopped being an important world oil exporter from the mid-1920s until the mid-1970s. Appendix 1 shows that from 1921 until 1973 the productivity of the Mexican oil sector was low. During this interval, the changes in oil price and its availability in Mexico wrought some instability, but not to a degree where of causing an economic crisis. However, the third epoch of oil in Mexico was marked by an impressive hike in production, so policymakers took advantage of the skyrocketing oil prices of the 1970's to closely tie the economy to the oil sector. In Appendix 2 it can be inferred that there are some parallels between the oil prices and the growth of GDP from 1973 to 1986, especially during the 1978 – 1983 interval. Nevertheless, the decay of GDP growth in 1983 cannot be attributed solely to oil since there was an economic crisis triggered by the ascending foreign debt payment requirements the Mexican government had to undertake. Both factors were the catalysts of the volatility of the Mexican economy. In 1986, the prices of oil dipped 50% compared to its value the previous year and national oil productivity decreased by 7.71%: this partly contributed to the -3.12% growth of GDP (INEGI, 2016).

The economy was completely remodeled by the 1990's as a consequence of the liberalization of the Mexican economy that started the previous decade through the Washington Consensus reforms. The economic model of Mexico changed dramatically: It distanced itself from its reliance of the oil sector and moved towards an expansion of the industrialization with the thrust of the private sphere[23]. Nevertheless, growth from 1989 to 1994 was inconsistent.

The following year was marked by yet again another economic crisis as a result the following five factors: 1) the mishandling of the denationalization of the banking system, 2) speculations on the devaluation of the currency, 3) the issuing of public debt in US dollars, 4) the uprising of the Zapatista movement in January 1994 and 5) the political uncertainty that rose from several assassinations of key politicians (Muñoz 2004, Sandoval 2011). The severances of the foreign debt that Mexico acquired after this economic debacle were eventually guaranteed with proceeds from the oil sector, which increased its productivity in 1996 by 9.21% in comparison to the previous year. From this point on, the oil sector acted as a buffer for the macroeconomic stability in the event that the authorities would utilize some percentage of the rents to replenish the international currency reserves of Banxico, the central bank.

The next decade saw a tremendous surge in oil prices, placing them at an all-time high. In 2002, a barrel of oil was sold at a price of approximately 33 USD per barrel and it kept ascending to 108 USD per barrel by 2008. GDP growth and the prices of oil show some similar patterns from

[23] The aim of the multinational corporations was to establish manufacturing operations in Mexico to drive down the costs of production. This meant that the factories that use to operate in the United States or in other countries would now be established in Mexico because they could pay much lower wages to the work force and increase profits. Ultimately, this culminated in the signing of the North American Free Trade Agreement (Muñoz, 2004).

2000 to 2006, but after that point the trend dissipates. Oil played a role again in the recovery of the Mexican economy in 2008 during the world financial crisis. The authorities had the leverage to induce austerity measures by increasing taxes and enabling numerous currency swaps with the U.S. This maintained liquidity in both countries (Banxico, 2009). However, oil prices decreased drastically in 2009 and this caused more uncertainty regarding the economic recovery of Mexico during this period of global recession. In 2009, the Mexican economy recorded the biggest drop in GDP growth since 1995, but the Mexican economy along with the oil prices recovered the year after. Consequently, there was another substantial decline in the price of oil barrels starting in late 2014 when the international oil market was flooded with an oversupply of this hydrocarbon. This resulted in lower returns on oil rents for the Mexican government, driving up speculative attacks that affected the stability of the economy. This degenerative effect, along with a high appreciation of the US Dollar[24], the deceleration of the Chinese economy and other complementing factors, debilitated the economy by prompting exit of foreign capital and lowering the prospects of growth for the future.

Ultimately, oil has had a significant impact on the stability of the Mexican economy, most notably from 1974 until 1986 when the economy became "petrolized". Nevertheless, the predominance of the oil sector as the main economic engine of the country did not last afterwards due to the liberalization of the economy. Oil took a substantive role in the economy by the late-1980s as a failsafe mechanism when the government needed to deal with macroeconomic instability. The revenues of the oil sector favored the macroeconomic recovery of the country

[24] The parity of the Mexican Peso against the US dollar is a good indicator of all these factors coming together. In 2014, the exchange rate was set at 14.73 pesos per dollar but by the May 20 of 2016 it stood at 18.45 (Morales, 2016).

during four economic crises. Be that as it may, oil also represents an intermittent threat to the stability of the economy when the prices or the national output decrease. The volatility of the oil sector in the last two years has aggregated to the vulnerability of the Mexican economy, but as the main cause of the current economic situation.

3.2.2 Dominance of the oil sector over the non-oil sectors of the economy

The oil sector has not had a hegemonic presence in the Mexican economy. In fact, oil in Mexico had been the main economic sector in two different periods: the oil boom of the 1920's and at the beginning of the third epoch of Mexican oil until the mid-1980s. Aside from these periods, the economy has been dominated by different economic sectors and it was not modulated towards producing a lot of exports but rather the opposite. During the "Mexican Miracle" period, the economy was arranged under an ISI model. From 1954 to 1970 Mexico was economically self-sufficient and it did not require to either export a lot of commodities or purchase large quantities of imports. Exports alone only accounted for 6.17% of GDP on average during the mentioned period.[25]

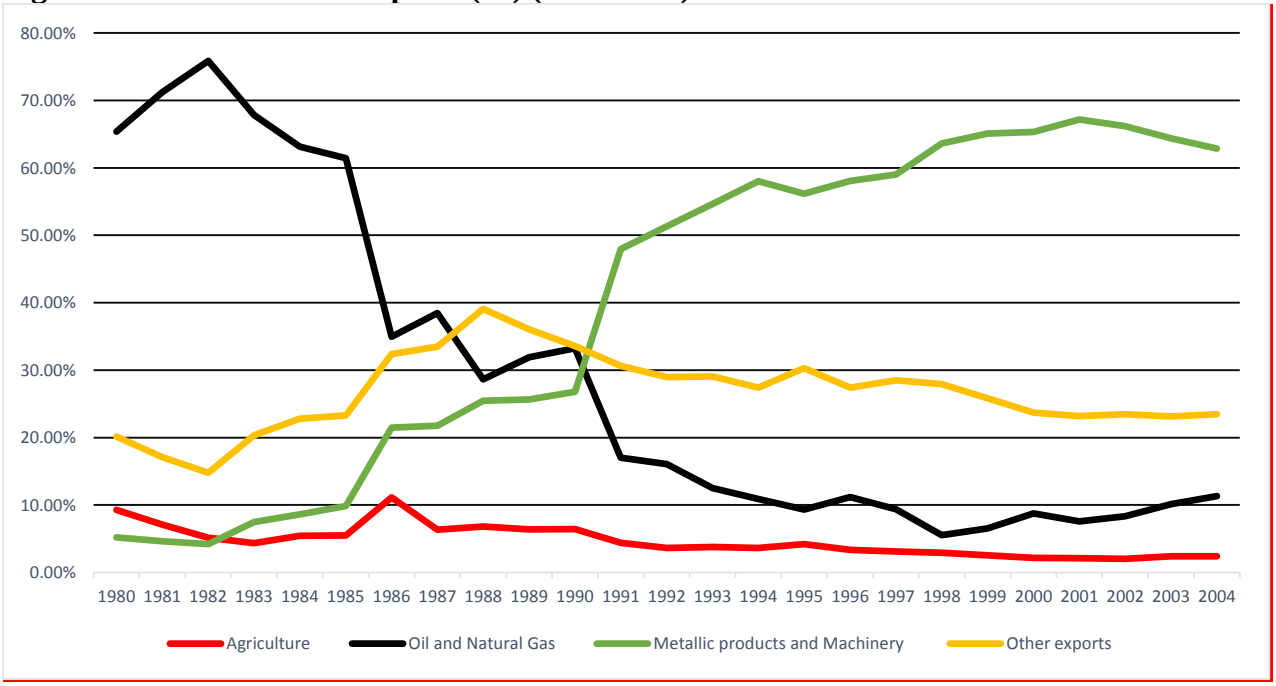
By the beginning of the 1970´s, the ISI economic model was exhausted and policymakers shifted gears by starting to export commodities. Coincidentally, this change coincided with the dawn of the third era of Mexican oil. The sales of crude oil barrels only represented 8.54% of the total earnings of the export sector in 1974, but by the next year this figure rose 54.12% and it

[25] The most relevant commodities which were exported from 1954 to 1973 were shrimp, coffee beans, livestock and glass (INEGI, 2016).

eventually reached its peak in 1981 at 75.85%. This change was so drastic that by 1982 exports now represented 37.41% of the GDP (INEGI, 2016).

The next year marked the beginning of the end of the dominance of the oil sector. According to the Export Diversification Index, the Mexican economy began to diversify radically from 1983 to 1987 (IMF, 2016). The data in Figure 3.2 mirrors the upswings of upscaling heterogeneousness of the Mexican economy after the oil prices collapsed and other sectors grew as a result of the economic reforms of 1983. By 1988, the oil sector became the second most prolific export sector and it continued to lose ground in terms of percentage of total exports sales. The year 1998 became the lowest point of the oil sector in the export category when it only accounted for 5.51% of total export revenues.

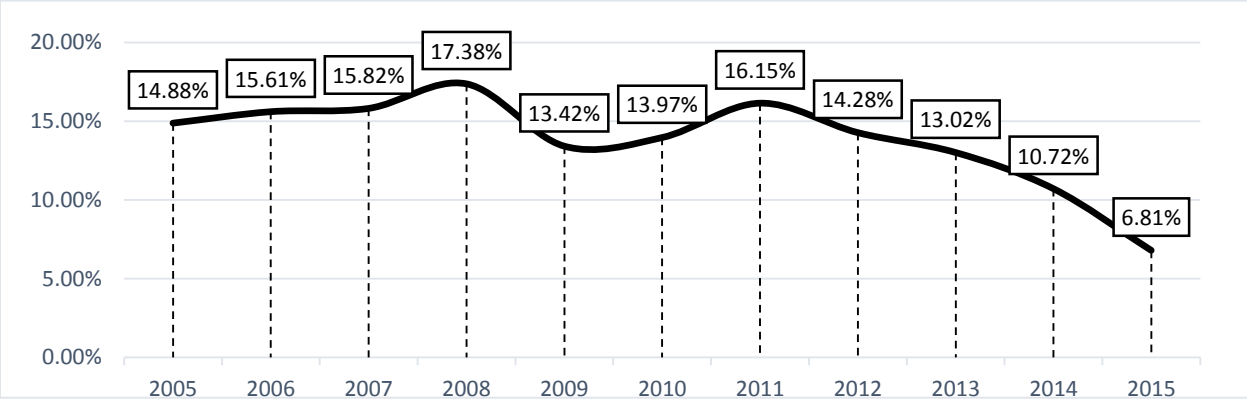
Figure 3.2 Share of Total Exports (%) (1980-2004)



Source: INEGI's databanks (2016).

Nevertheless, the high yield of the oil wells of the southeastern basin rendered a rise of the percentage share in total exports by the early 2000's. The oil sector represented an average of 13.82% of all the Mexican exports from 2005 to 2013 according to the data from Figure 3.3.

Figure 3.3 Oil Exports as share of Total Exports (2005 - 2015)



Source: INEGI's databanks (2016) and Office of the Mexican Presidency (2015).

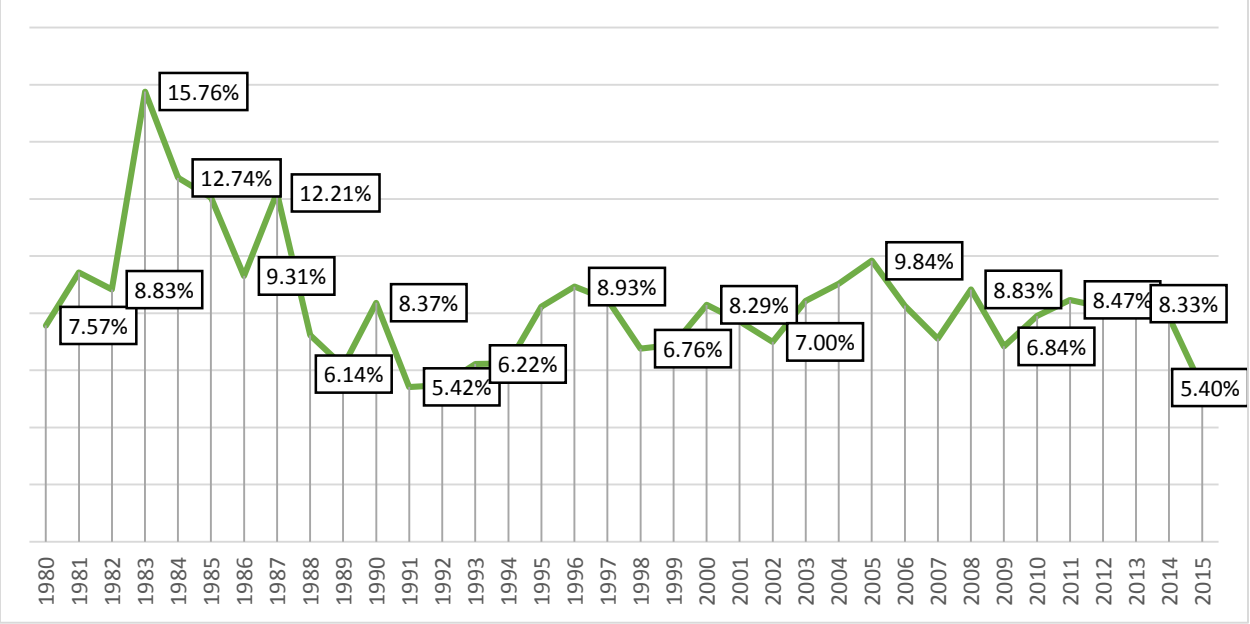
With these facts in mind, it is visible that the oil sector did not have the fortitude to prevent the expansion of the other economic sectors of the Mexican economy and this allowed their ongoing development. The volatility of the production of the oil sector never reached a stage where it could drive out the adjacent sectors, in large part, because of its productivity inconsistency through time and the swift changes of oil prices. Instead, it has taken a complementary role in the economy throughout its existence, except during the already mentioned periods of productivity bonanza. Thus, the oil sector has not been an impediment for the gradual advancement of other industries in the Mexican economy.

3.2.3 Taxation Effect

The data in Appendix 3 reflects high indexes of reliance on oil rents to finance federal public expenditure at two different junctures. The first one spanned from 1920 to 1924, when the oil sector in Mexico reached its peak of production. In 1921, 31.30% of the federal public income

came from oil rents but this share percentage waned down as the production of oil decelerated rapidly. The share percentage of yearly public income that was financed by oil rents did not exceed 20% from 1925 to 1979. The following year marked the beginning of the second era of high dependence on oil rents as the government expanded the extraction of Pemex's earnings. The second period extended from 1980 to 2014, which was plagued by constant upward and downward percentage fluctuations, especially during the late 1980's and the early 1990's. Figure 3.4 demonstrates that oil income in terms of GDP percentage were above 10% from 1983 to 1987. However, the oil sector has not reached this peak ever since. Regardless of the latter, the authorities managed to sustain an average of 34.31% share percentage of public income financed by rents during the 1995 – 2014 interval. Nevertheless, the trend abruptly took a backlash in 2015 as a result of Pemex's dwindling productivity and the dive of oil prices.

Figure 3.4 Oil income in terms of GDP % (1980 – 2015)



Source: CEFP (2007) and SHCP's databanks (2016).

On the other hand, the authorities have attempted to increase its non-oil related tax collection, but this has not driven out the dependence of oil rents. Mexico is the OECD member

that collects less tax revenue in relation to its GDP, averaging only 16.33% of their GDP within the 1980 – 2013 period. The State collected 6.0% of the GDP in income taxes in 2013, while the OECD average oscillated around 10.5% of GDP (OECD, 2016). This shows that there are some strong signs that Mexico has high symptoms of rentierism in the taxation category, particularly from 1980 onwards.

3.2.4 Spending Effect

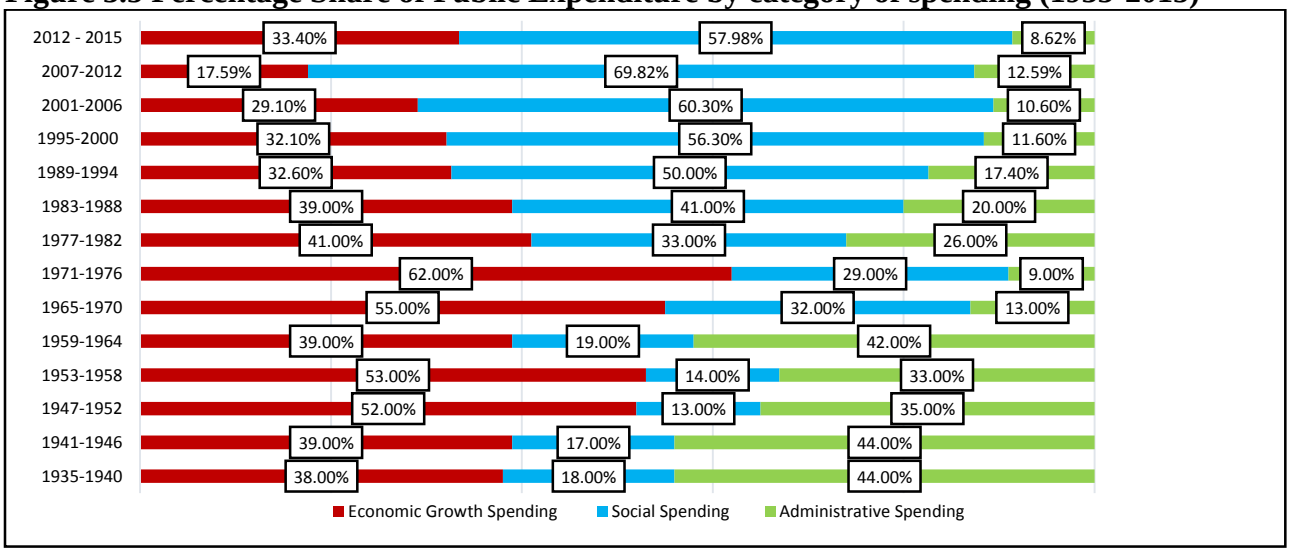
Figure 3.5 shows diverse changes in relation to the prioritization of government functions.[26] From 1935 to 1964[27], a huge percentage of the public expenditure was devoted to administrative functions, which could mean that bureaucrats were being directly benefited by the rents accumulated by the State. However, this period was signified by low returns of rents since the oil sector was being reorganized and it did not achieve high rates of profitability. This configuration acutely changed between 1965 and 1976 when only 11% of the total expenditure was allocated for administrative purposes. From this point, the government put the economic development needs of the country on the top of the agenda, followed by a boost on social expenditure. At the dawn of the third epoch of Mexican oil, this allocation tendency continued until 1983, when the social spending category became the priority area of government expenditure. Nonetheless, administrative functions received 21.0% of the expenditure from 1977 to 1994, but it eventually fell to 10.86% for the 1995 – 2015 period.

[26] The Economic Growth Spending category alludes to all of the government's efforts to incentivize economic growth, the Social Spending category covers all of the government transfers that are allocated for social welfare and the Administrative Spending category includes public servant's remunerations, acquisition of goods and other costs related to bureaucratic institutions.
[27] The exception is the 1947 - 1958 period as the Economic Growth spending category had the largest percentage share of public expenditure.

Ever since then, social spending has been maintained above 55.0% of the total public expenditure, while administrative and economic growth expenditure has decreased in real terms with exception of the 2012 – 2015 where economic growth spending doubled in comparison to the previous six years.

Data from the OECD (2016) points out that Mexico is the member country of this organization that devoted less to Government Production Costs from 2007 to 2013 with a yearly average of 11.6% of GDP. In contrast, the OECD average was equivalent to a yearly average of 20.03% of GDP[28].

Figure 3.5 Percentage Share of Public Expenditure by category of spending (1935-2015)



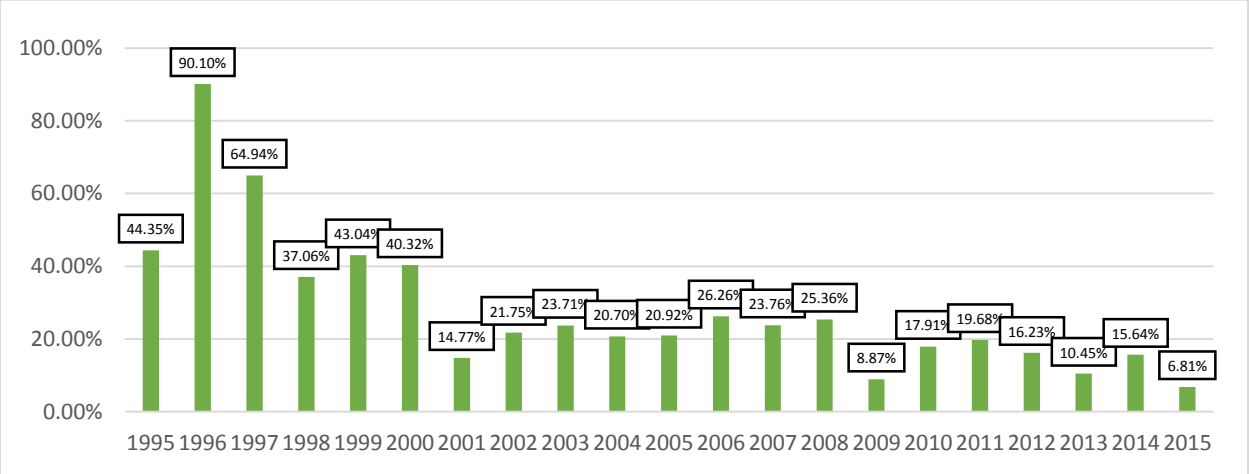
Source: INEGI's historical statistics databanks (2016).

Despite the fact that more public funds are allocated towards social spending and economic growth, there is evidence that demonstrates that the government has kept increasing personnel

[28] Government Production Costs encapsulate the "compensation costs of general government employees; goods and services used and financed by general government" (OECD, 2016). This category closely resembles the Administrative Spending category posited by INEGI.

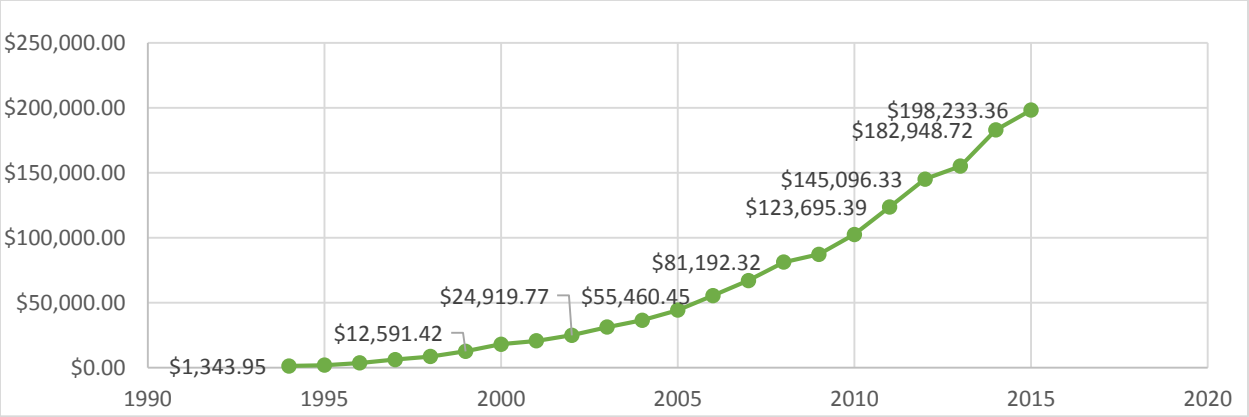
expenses at very high rates. Figures 3.6 and 3.7 show that administrative expenses have kept going up extensively, while real growth in expenditure depreciated to 2013 Pesos and 2015 US dollars.

Figure 3.6 Yearly percentage increase on expenditure allocated to personnel expenses in 2013 Pesos (1995 – 2015)



Source: SHCP historical statistics databanks (2016).

Figure 3.7 Public expenditure allocated to personnel expenses in 2015 Million USD (1995 – 2015)

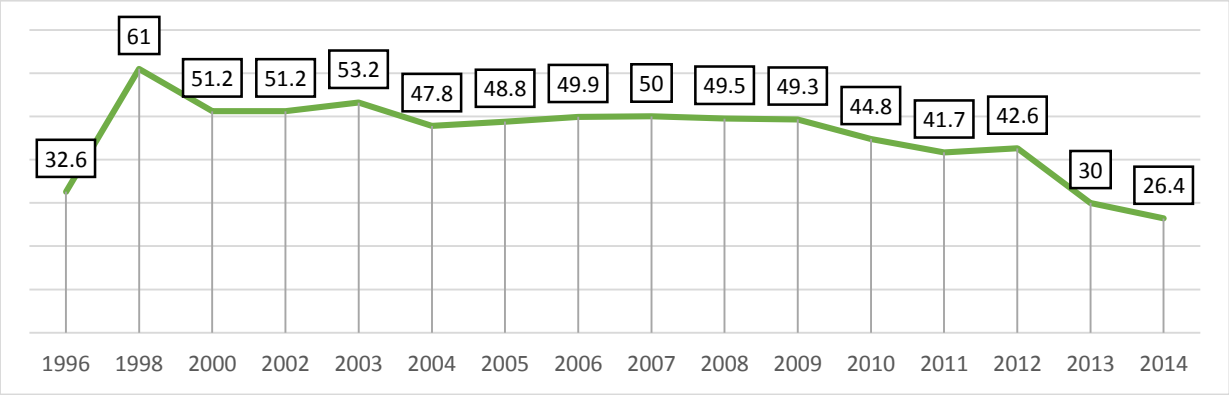


Source: SHCP's databanks (2016)

Key policymakers have voiced their concerns regarding the role of oil rents and personnel spending, since the former incentivizes higher salaries for public servants instead of allocating

more resources towards economic growth or social spending.[29] Corruption in Mexico is predominantly high within governmental institutions and the permanence of a patronage is a contributing factor to this informal activity. The data from the World Governance Index highlights that Mexico has been gradually losing control in handling corruption from the year 2000 onwards. The latter trend is depicted in Figure 3.8. Another indicator that validates the presence of a spending effect might stem from the fact that Mexico is the OECD member that devotes the least amount of resources for social expenditures in terms of GDP with 7.3%, while the average expenditure of member states is approximated at 19.4% of their GDP (OECD, 2016).

Figure 3.8 Yearly assessment (0 – 100) of control of corruption (1996 – 2014)



Source: World Bank (2016).

Still, it is inconclusive to what degree bureaucrats and other public officials benefit from the oil rents while bypassing the needs of the general population, but there are a lot of indications that suggest that oil rents encourages the perpetuation of an ongoing patronage within the Mexican bureaucratic apparatus.

[29] One of the most vocal advocates against these spending behaviors was the former Governor of the Banxico, Guillermo Ortiz Martinez (Colmenares, 2008: 62).

3.2.5 Group Formation Effect

The empirical evidence presented in Appendix 4 reveals that the size of the government in terms of GDP stayed above 35% from 1980 to 1987. Meanwhile, oil income in terms of GDP percentage remained above 10%. Soon after, the government shrank as a result of the auctioning of 85% of the parastatal companies (Muñoz, 2004). From 1990 to 2008 the size of the government did not surpass 25% of the GDP produced yearly and oil income in terms of GDP percentage has not gone over 10% ever since. In summary, oil income decreased in terms of GDP and the size of the government been below 30% of GDP from 1987 onwards.

However, the latter indicator does not uncover the entire history of the group formation effects in Mexico. The fact is that the Mexico had 70 years of uninterrupted rule by the Institutional Revolutionary Party (PRI). During this period, all of the political actors had to either collaborate or join the party in order to gain access to public office or to have a beneficial relationship with the government. Civic associations that were outside of the PRI did not have a lot of strength. Opposition parties and groups that opposed the PRI began to accumulate political leverage as a result of the economic crises of 1982, 1986 and 1994 and this led to the displacement of the PRI in the 2000 presidential election (Sandoval, 2011). Since then, the political arena has been controlled by different political actors and more political parties have sprawled during the last 15 years.

In short, the formation of political groups or civic associations was very restricted in Mexico from 1938 to 2000 unless it went along with the political agenda of the PRI. Bazresch and Levy (1991) argue that the regime was reinforced by the oil boom of the 1970s since the oil rents appeased several political factions and this gave continuity to the regime. Nevertheless, the

hegemonic order was broken after several economic debacles and the loss of confidence in the PRI in the 1990s. This culminated in the entry of other non-PRI actors to the political scene. However, there are still some residues of elitism which are reflected in the levels of corruption in the country according to the findings in the trends detected in the previous analytical category (Spending Effect).

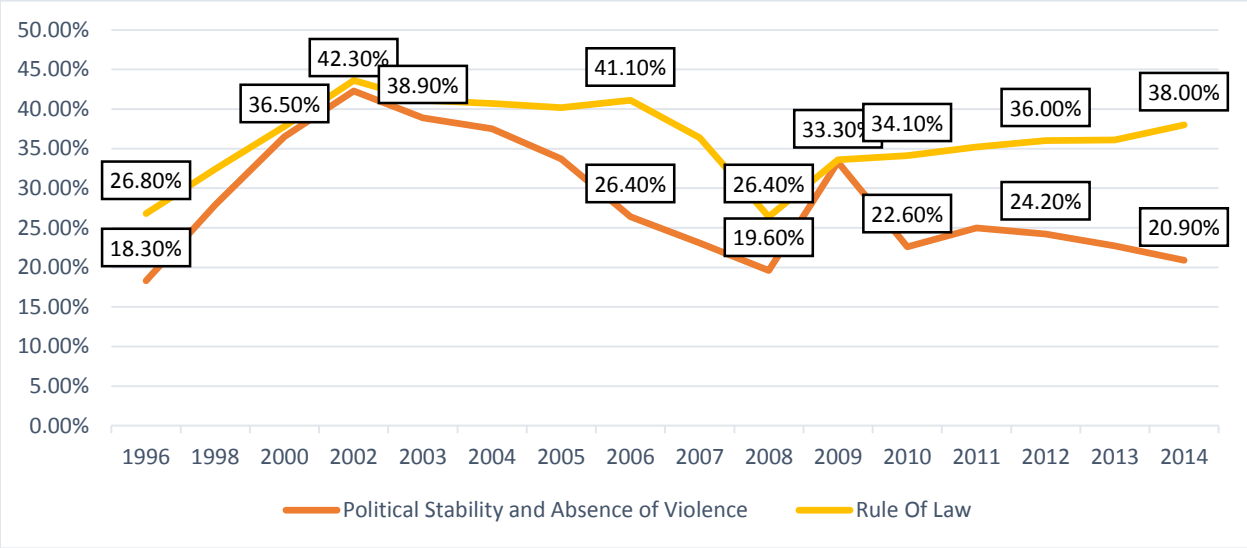
3.2.6 Repression Effect

Military statistics demonstrate that the number of military personnel increased by 160.30% from 1985 to 2015 (SIPRI, 2016). Nevertheless, military spending as a percentage share of the public budget has remained constant between 1990 and 2015 as opposed to the volatile trends of yearly percentage changes of oil revenues that are displayed in Appendix 5. There have been only two spikes of higher allocation towards military expenses and they are attributed to the military response of 1994 against the rebel insurrection in Chiapas and the intensification of the drug war from 2006 onwards.

In terms of political and civic freedoms, Mexico was categorized as being a "Partially Free" nation by the Freedom House from 1973 to 1999 (Freedom House, 2016). The regime was repressive during the second half of the 20th century. After the PRI lost its control over the presidency in the 2000 election, Mexico was categorized as a "Free" country as the level of democratic and civil freedoms were being enjoyed by more members of society. However, this assessment returned to "Partially Free" by 2011 as confidence in the authorities decreased as a consequence of the perception of rising corruption nationwide and the up-scaling of violence in the country (Freedom House, 2016). These two last aspects have been at the center of the dysfunctionality that has persisted in Mexico in recent years and it has led to more instability.

The trajectories of the World Governance Indexes on Rule of Law, as well as Political Stability & Absence of Violence, displayed in Figure 3.9 signify that the government has encountered constant issues in trying to establish order in political and security terms nationwide.

Figure 3.9 Scores (0 – 100%) of the World Governance Indicators (1996 – 2014)



Source: World Bank (2016).

In synthesis, the Mexican government had a long track of repression during the second half of the 20th century. After the one party rule ended in 2000, the government has kept losing control over its capacities to maintain a rule of law as escalating violence has plagued the country after the government declared war on the drug cartels in 2006.

3.2.7 Modernization Effect

In the case of Mexico, it is complex to track how oil has influenced the educational, technological or the entry of foreign influence. Mexico is a nation that characterizes itself for having profitable economic sectors, a long standing relationship with the United States and having sociopolitical importance in the continent. Additionally, the Latin-American nation is part of the OECD, which demands high standards that a lot of nations cannot meet. Therefore, the influence

of oil in the development of the nation is not palpable since there are so many other factors that do play a significant role.

3.3 Discussion

The results of the assessment of the seven analytical categories indicate some symptoms of the resource curse thesis do appear in Mexico in different degrees. The analytical category that deals with the Effects of the volatility of the prices of oil demonstrated that Mexico is vulnerable to decreases of oil prices. Nonetheless, Mexico has also benefited greatly when the prices of oil go up. In contrast, the oil sector did not crowd out other sectors of the economy and this influenced the expanding diversification of the economy that started in the mid-1980s.

The analytical categories of the political dimension showed strong rentier patterns in the Taxation category. On the other hand, the results from the Spending and the Group Formation categories were not definitive due to the difficulty of identifying how political elites and the patronage networks received proceeds from oil rents. When it came to the assessment of the Repression Effect, the country had a repressive period when the PRI controlled the presidency and the oil rents gave the political elite the means to stave off the oppositions. Although, the empirical evidence between oil income and military spending did not show any relationship. Lastly, it was not possible to determine if oil has had an effect on the development of human capital in Mexico. In the next and final section of this research, I condense the findings of this research.

Conclusion

The main objective of this research has been to answer whether there were any political or economic symptoms of the resource curse in a country that has a substantial oil sector, but primarily due to its size and diversified economy is not considered as a cursed economy. One of the goals of this project was to explore a country that is often singled out as a successful case of overcoming the resource curse. The findings of the Mexican case suggest that the country does show considerable symptoms that oil-dependent nations also have, in particular in the Taxation analytical category. However, the degree of the symptoms was lower in the other analytical categories. These are the specific results with regards to the seven analytical categories:

- The Taxation category ascertains that the state finances public expenditure from oil revenue to the degree that low tax levies on the population are imposed. From 1980 to 2014, oil revenues contributed on average to 30.5% of the federal public income (INEGI, 2016). This shows that the state reflects a high reliance on oil, which is an intrinsic characteristic of rentierism. Prior to this period, the share of public income financed by oil was relatively small;
- The Effects of the Volatility of the Prices of oil category gauges if the changing prices of oil have either affected or benefited an economy. In the case of Mexico, the fluctuations of international oil prices have had several significant economic repercussions. The economy has displayed mild negative signs of economic volatility when oil prices fall. If the prices collapse, then the government collects less public income and it might resort to acquire foreign debt. This can fuel the negative speculation regarding the macroeconomic health of the country. Regardless of these fluctuations of oil prices, these reverberations have not had a cataclysmic effect on the economy. On the plus side, the government disposes of the plentiful revenues if

oil prices are high. They have been used to either finance public expenditure or accumulated US dollars for central bank reserves;

- The Spending category analyzes if oil revenues are captured by the political elites or patronage networks for their own benefit, while the Group Formation measures the magnitude of the government and how it suffocates political oppositions. These analytical categories showed inconclusive indications that the political elites and patronage networks appropriate oil proceeds to satisfy their profit maximizing interests or suppress opposing political actors. There is not enough historical or statistical evidence that can confirm the hypotheses of these analytical categories;
- The Dominance of the Oil Sector over the non-Oil Sectors category scrutinizes if the oil sector has hindered the development of other economic sectors. The Mexican oil sector was the main national economic sector in two separate historical periods: 1920 – 1924 and 1979 – 1986. Aside from these, the economy has been driven by other sectors that have expanded throughout time, especially after the late 1980s. Oil exports from 1980 to 1986 represented an average of 62% of total exports revenue, but from 1987 to 2004 they only constituted an average of 28% of total export revenue (INEGI, 2016). Therefore, the oil sector did not interfere with the growth of other sectors.
- The Repression category detects if higher oil revenue is connected to the expansion of military budgets to repress the population. From the late-1970s and to the mid-1980s, oil played a role in maintaining the PRI in power. Oil provided the material incentives for the political elite to withhold power and hold off political oppositions. But from the 1990s onwards, different political and economic events not connected to oil dramatically reshaped the political order in Mexico and oil revenue did not seem to influence military spending. The government increased

military expenses significantly only after the 1994 insurrection in Chiapas and the escalation of the war against the cartels. Notably, there are indications that point to the government having lost its ability to maintain the rule of law over the last 10 years;

- The Modernization category implies that oil impedes the educational, cultural and technological influences from influencing the development of a country. In the Mexican case, it was found that oil has not had an effect on this classification. Since the nation has close political and economic links with the U.S., this has resulted in a constant inflow of industrial, economic, technological and cultural exchange.

The findings of this thesis match only some of the suppositions of the resource curse theory. The literature however focuses on countries that are fully oil dependent.

4.1 Discussion

Even though the foreign oil companies exerted a lot of influence from the early 1900s until 1938, they were not able to stage the capture of the Mexican state. The latter had the upper hand over the oil companies, because prior to nationalization, the companies were reeling from the oil extraction decline of the Mexican oil sector in the mid-1920s (Brown, 1992: 26).

Until it became a very profitable economic sector, oil became complementary to the permanence of the political regime of the PRI, institutional inefficiencies in the state apparatus, corruption and patronage links. From 1938 to 1979, Pemex could not finance a high share of public expenditure from oil proceeds. It was not until 1980 when the rents from crude exports became a crucial source of public income. The main problem with the Mexican oil sector is that the

authorities have politically overinvested[30] in it by reallocating the proceeds of oil for public finance instead of collecting taxes from citizens and corporations.

Nevertheless, the presence of large oil reserves in Mexico has not been just a curse, but it also benefited the state at different junctures. Even though the Mexican oil sector was not very profitable from 1938 to 1973, it did lay the foundations for economic growth during the *Mexican Miracle* economic growth period, where national industries flourished as a result of the protectionist policies that increased oil consumption. In addition to this, the proceeds of oil were pivotal for the recovery of the nation after the 1982, 1986, 1994 and 2009 economic crises. Therefore, I argue that Mexico has not only been cursed, but also blessed by the oil endowments that lie beneath its territory.

Presently, the outlook of the Mexican oil sector is grim. The share of oil rents in total public income has decreased from 29.8% to 20.0% between 2014 and 2015 and this trend might continue as speculation surrounding oil prices suggests that the price per crude barrel will range between 50 and 60 dollars from 2016 to 2020 (Reuters, 2016). This has provoked massive public expenditure cutbacks and delayed public works nationwide. Additionally, social benefits have been downsized and the potential impact of a long period of low oil prices hurts prospect for growth. Nevertheless, this decrease of oil revenue forces the government to collect more tax revenue from different sources and thus it has the potential to neutralize the most significant characteristic of a rentier state that the Mexican state apparatus has.

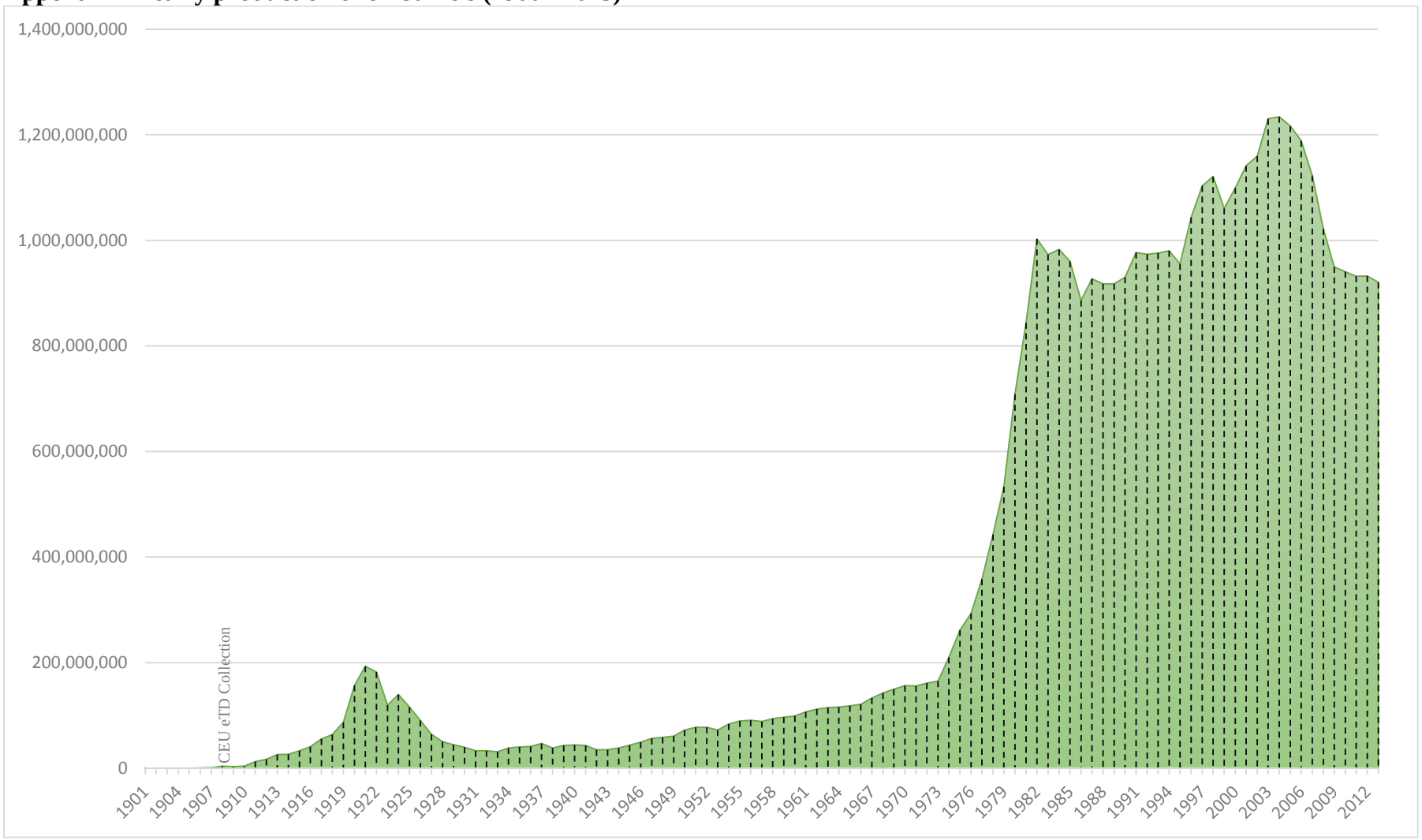
[30] Baker (1992:297) ascertains that Mexico overinvested on oil because the government transformed it into a source of national pride and social welfare. The citizens and the political elites over pushed the oil sector to the degree that it harms society.

The present challenge for Mexico is to increase public income outside of the oil sector through direct and indirect taxation. Although, there are some macroeconomic risks that could surface if the levies on direct taxes are raised, particularly corporate taxes. If these were to be elevated, then this might discourage national and international corporations from investing or continuing their enterprises in Mexico. This might compromise the integrity of the industrial and manufacturing sectors that form part of the Mexican economy.

Looking on to the future, research could be centered on other symptoms that could be operationalized to gauge the socioeconomic and political impacts of the resource curse. The scope of the Spending categories should be broadened to see how public income is disbursed, especially in the social welfare sphere. Furthermore, an operationalization of resource curse symptoms could be expanded to compare different cases of oil-dependent and non-oil dependent countries.

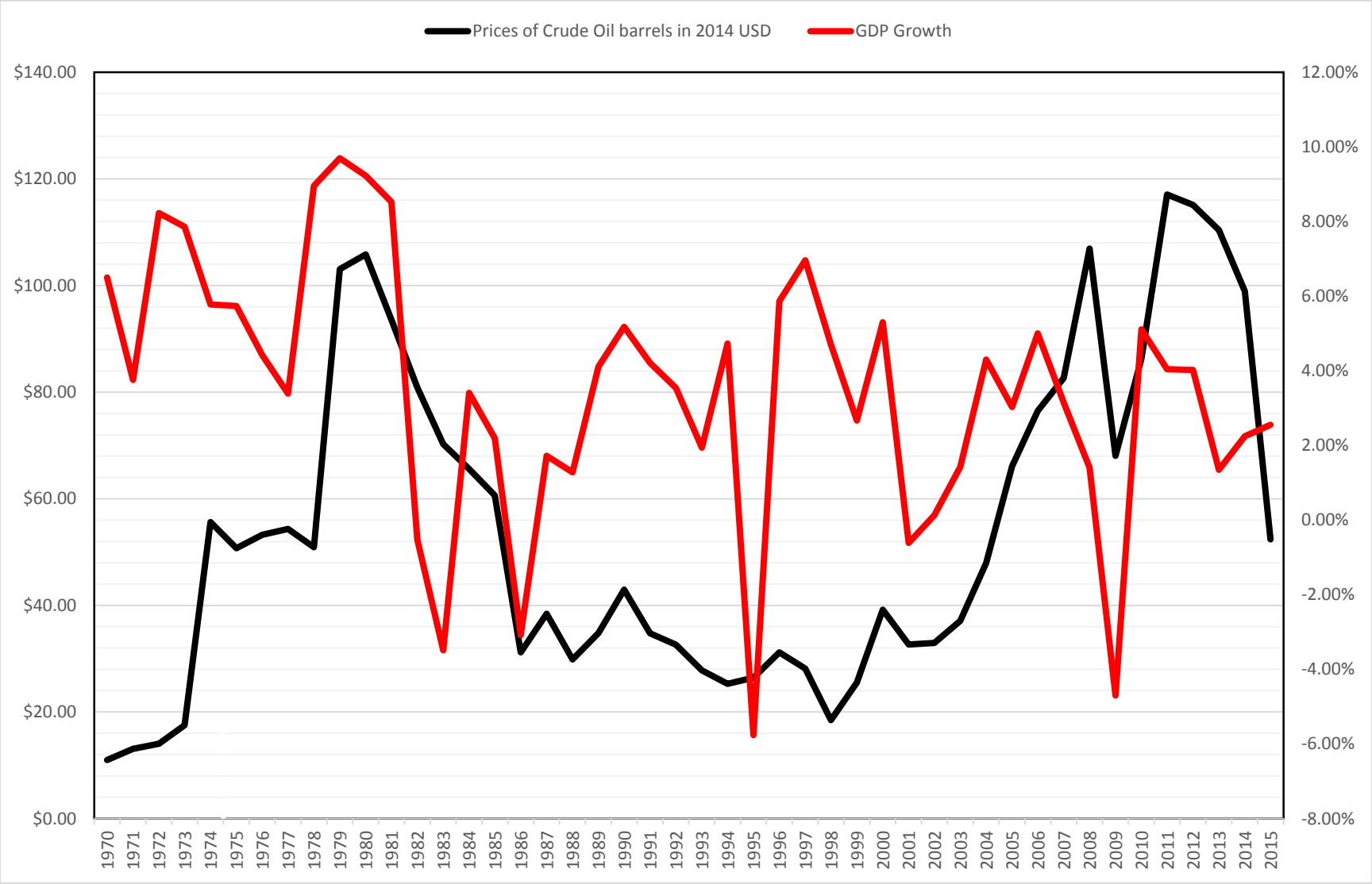
Appendices

Appendix 1 Yearly production of oil barrels (1900 - 2013)



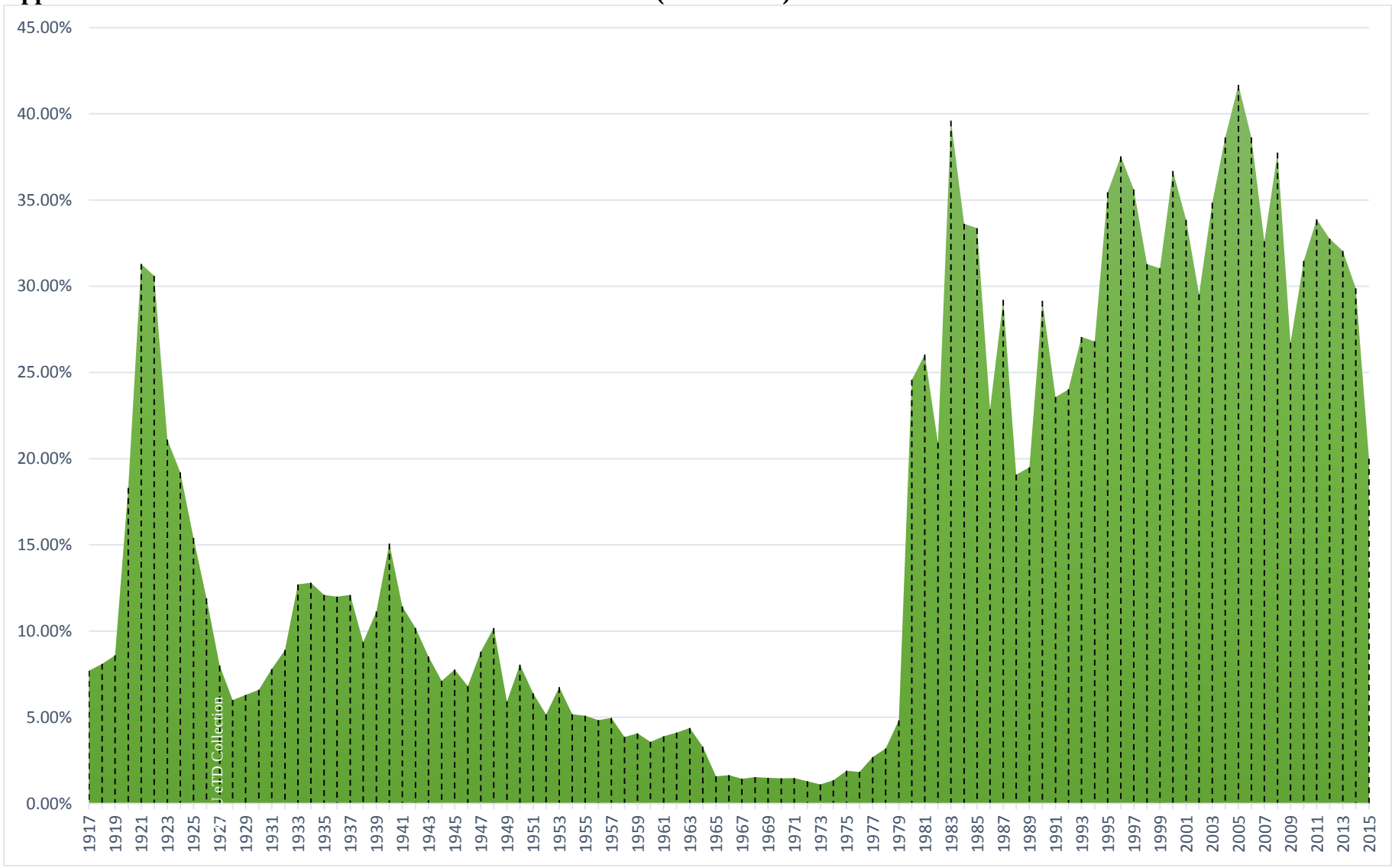
Source: INEGI's databanks (2016).

Appendix 2 Relationship between the Price of Crude Oil Barrel in 2014 US dollars and Annual GDP Growth (1970-2015)



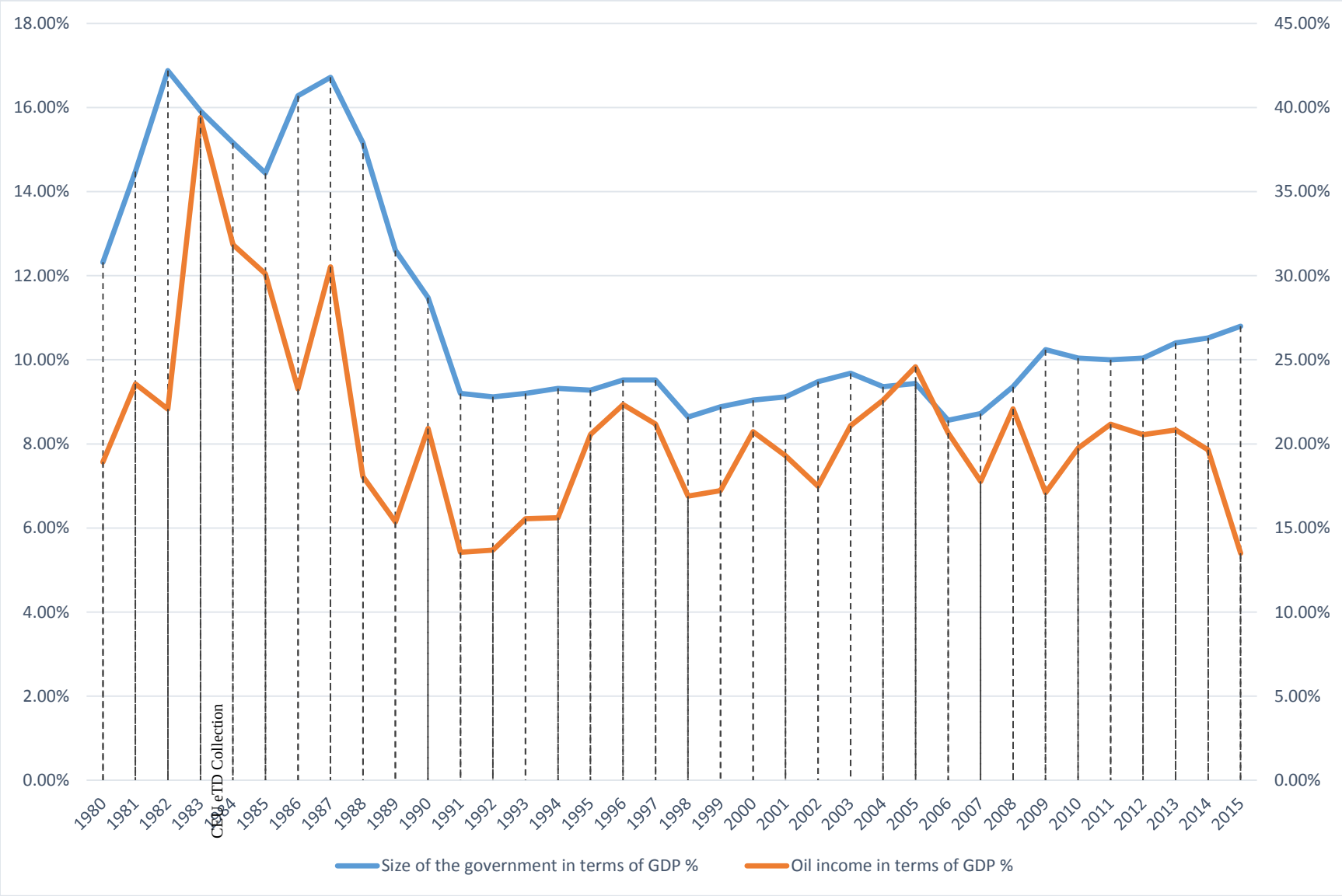
Sources: BP Statistical Review of World Energy (2015) and INEGI's databanks (2016).

Appendix 3 Total Oil Rents as share of Federal Public Income (1917 - 2015)



Sources: Pemex Yearly Statistical Report (1999), INEGI's databanks (2016), SHCP's databanks (2016) and Uthoff (2004).

Appendix 4 Size of the government and Oil Income in terms of GDP (1980 – 2015)



Source: CEFP (2007) and SHCP's databanks (2016).

Appendix 5 Percentage share of Public Expenditure allocated to Military Spending and Yearly Percentage Change of Oil Revenues deflated in 2015 Mexican Pesos (1991 – 2015)

Source: CEFP (2007), SHCP's databanks (2016) and SIPRI (2016).

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