Abstract

This paper analyzes resource dependence under the lens of institutional age, measured in years. By omitting measures of institutional quality, we avoid biases and undue distortions in our data caused by the relationship between institutional quality and resource dependence. When focusing the 19 states found in the Middle East and North Africa, we find that institutional age has a large role relationship in the development of rentier states and their unhealthy dependence on resource extraction. The colonial history of institutions in the MENA region is also considered and is found to be partially significant in development outcomes.
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Introduction

Despite their abundance of wealth, resource dependent states find themselves experiencing a plethora of negative long-term effects. Such resource dependent states, which depend heavily on commodity exports, are considered to be ‘rentier states’ when their rents compromise a significant portion of government revenues. Though large amounts of wealth are generated from highly valuable commodities, these states often fail to maintain benchmark economic growth and struggle to develop a diverse economy. The inability for rentier states to use windfall funds effectively, among other symptoms, is referred to as the ‘Paradox of Plenty.’ In the long run, these trends create unpleasant effects such as a narrow elite class and a propensity for authoritarianism.

The Paradox of Plenty, also known as the ‘resource curse,’ manifests differently in each state and may even fail to appear in others. While these variations are attributed to a complex mix of factors, this paper seeks to use institutional age as a predictor for the degree of resource dependency across a broad range of rentier states in the Middle East and North Africa. Papers such as Mehlum, Moene and Torvik (2006) indicate that “good” and inclusive institutions yield superior economic results compared to “bad” and extractive ones. Institutions tend to build from one another and can lock a country into an economic path dependence. This path dependence is established early in a state’s development and is difficult to deviate from. Young and weak institutions are far more susceptible to large economic shocks and poor economic decisions than more established and stronger ones, and their development is difficult to reverse. Even with the wealth of resource windfalls, the progression of rent-seeking institutions is difficult to reverse, and nearly impossible without. As it is suboptimal for states to depend on rent from a few or a single extractive resource in the long run, we assume that this path of development is more likely to occur in states with young institutions. Thus, this paper will examine the relationship between institutional age and the level of rent extracted by oil exporting states. Oil exporting states were examined due to the relative accuracy and availability of data. By examining this metric for institutional strengths as a precursor to the trap of the rentier state, policy makers, scholars and politicians will be better equipped to avoid and unwind any negative characteristics of
the paradox of plenty. In simplifying the measurement of institutional strength by using its age in years, this paper seeks to capture the importance of institutional stickiness and development over time. Furthermore, by avoiding metrics of institutional strength as a variable, which directly affected by rentier states and vice versa, we help reduce any undue influence in the estimates.

The Resource Curse in the 21st Century

The resource curse is a curious puzzle which affects a large number of low- and middle-income states today. Many of these states struggle to use their resource wealth for sustained economic growth, and most are trapped in their income groups. Papers such as Kharas and Kohli (2011) put the blame on their ‘inability’ to shift growth strategies after entering the middle-income status. Sachs and McArthur (2004) note a similar phenomenon with much of Sub Saharan Africa faltering into the ‘poverty trap,’ in which poor growth holds these states in the low-income status. They go on to state that poor governance and a lack of public investment is at fault, with a recommendation for ‘foreign donors’ to help pull these countries out of poverty. While poor governance is indeed a contributing factor to poor growth outcomes, this is most often a symptom of poor institutions. Entrenched institutions can demand poor policy choices, risking state stability if their needs are not met. Historically, even with large windfalls, resource rich countries are unable to reverse or change their poor institutions. Thus, institutions and entrenched interests, rather than governance, presents a stronger causal relationship to rentier states.

In the most extreme example of the 21st century, Venezuela’s resource dependence and wealth mismanagement has led to hyperinflation and a lack of basic goods and services in the country. Despite possessing the world’s largest oil reserves, Venezuela’s volatile spending and rampant corruption has led to a near collapse of its economy. An exodus of its citizens fleeing for work and constant negative economic growth illustrates how resource mismanagement can decimate an economy. High levels of spending tied to wealth derived from a volatile commodity has negative long-term effects. A prominent Venezuelan diplomat, Juan Pablo Pérez Alfonzo, and the chief architect behind the Organization for
Petroleum Exporting Countries (OPEC) lamented in an interview that, “We are drowning in the devil’s excrement” (Karl, 1999).

The resource curse is also partially responsible for the exceptionally slow growth of sub Saharan Africa. Sub Saharan Africa as a region is extremely dependent on natural resource rents, with exports accounting for over three fourths of all Gross Domestic Product (GDP) in 2013. This has been paired with exceptionally low growth rates, poor standards of living and high levels of political turmoil. Poor institutions contribute to the creation of an ineffective and illegitimate governing apparatus, allowing a narrow ruling party to enrich themselves at the public’s expense. The lack of legitimacy brought about by poor governance allows for their rule to be challenged and replaced by similar extractive rulers. Mbaku and Paul (1989) confirm this by documenting a positive relationship between government rents and destabilizing political activity in Sub Saharan Africa.

The authoritarianism prevalent in the Middle East is also due to effects of the resource curse. Ruling parties often use oil wealth to offer economic incentives to dissenters and to fund coercive apparatuses. Brownlee and Masoud (2013) draw the connection between Arab states which withstood the wave of regime change during the Arab Spring with their volume of oil exports. The states that remained authoritarian were generally the ones who exported the most oil. Saudi Arabia alone offered its citizens a stimulus of over $80 Billion in February of 2011 to counter the effects of the dissenting citizens. Many others, enriched by their oil wealth, followed suit.

But despite these dreary statistics, the resource curse does not seem to afflict every country in the same way. In the past few decades, countries such as Norway and Botswana have seemed to defy its grasp. Despite both of these countries depending heavily on single resource exports, they have posted above average economic growth through effective wealth management and strong institutions. The following sections will examine what determines the success or failure of a rentier state. What factors best enable a state to avoid the Paradox of Plenty? And what role do institutions have in determining these outcomes?
Institutions

Institutions are a set of far reaching and widely recognized series of norms and customs that are present throughout a city, locality, region or state. These can be both written and unwritten, and institutions tend to build off prior ones. Their most important function in society is to reduce uncertainty and transaction costs (North 1991). Institutions are present in every society and are responsible for creating the economic mechanisms for success or failure (Reich, 2016). Their development is often over the course of decades if not centuries.

In simplified terms demonstrating their linear development: trade mechanisms in small sustenance farms in the very beginning of human history were primarily based on personal relationships to ensure both parties attained a reasonable exchange and a fair contract. Because of repeat business and small social circles, there was little room for unfulfilled or poorly filled contracts. Those who did not honor contracts quickly found they could no longer conduct business in their towns. However, as cities and surpluses grew, the mechanism of personal relationships and informal contracts was insufficient to ensuring the low cost of trade. Those who broke contracts could simply move to a new town where their shady practices were unknown. This led to the development of more formal methods of contract enforcement such as a set of written laws enforced by a central authority and a legal system. Growth and trade led to the development of institutions that could effectively enforce and regulate contracts between two parties (North 1991).

Once frameworks or new institutions are created, a large number of surrounding institutions or vested interests become closely tied together. For example, in establishing a particular legal system, the corresponding businesses or organizations can use them to conduct business in a predictable and steady fashion. Thus, if any forces sought to alter the established legal system, the surrounding institutions often make it prohibitively difficult. Any attempt to do so would require considerable disruptions to the surrounding institutions, ones which would be discouraged by the entrenched institutions. While this is one simple example of institutional advancement, there is a plethora of institutional growth, drift and entrenchment processes that occur concurrently. Regardless of the method, institutions continue to grow around one another, becoming more established over time. Thus, the
institutions within a state are developed and strengthened over time, seldom changed as they are extremely interconnected with one another.

Types of Institutions

Darron Acemoglu and James Robinson (2013) classify institutions into two primary categories, extractive and inclusive. States with inclusive institutions generally provide market participants a level playing field. For example, few special privileges or prerequisites are required to conduct business in states with inclusive institutions, allowing nearly all to participate. Inclusive institutions can include property rights, competitive contracts and clear bankruptcy laws (Reich, 2016). On the other hand, states with extractive institutions are often those with unclear transaction costs, usually manifesting as bribes, kickbacks or other ‘carrots.’ Extractive institutions are prohibitive to business entry and innovations. These can develop in a plethora of ways, including rent extraction, little political representation or removing portions of citizens from economic participation. Thus, an unclear playing field is created, and a small group of elites benefit from economic incentives.

If institutions are built surrounding a single dominant industry, they can begin providing unfair advantages to maximize the gains of that industry. But this often occurs at the expense of other sectors of the economy. Once extractive institutions are established, they can only be diminished gradually. When Venezuelan President Carlos Andrés Pérez attempted to change Venezuelan institutions to be more inclusive in the early 1990’s, he not only was faced with two military coup d’états and the Caracazo popular uprising, but was also forced out by the Supreme Court. The instability brought by the over-reliance of oil exports as well as the resistance from attempting to change entrenched institutions directly led to Pérez’s downfall. The vested interests that develop around the established institutions ensure that they are slow to change and difficult to alter, regardless of how harmful they may be to the states long term economic health.
The Rentier State

When a state becomes dependent on substantial external rents as a source of government income it is considered a rentier state (Beblawi, 1987). These rents are usually collected, by the state, from natural resources or commodity exports. When large external rents are extracted, the state apparatus is no longer dependent on taxes derived from the domestic economy, absolving it of its democratic responsibilities. In most cases, the rent extraction is distributed to a small minority elite, largely excluding the masses. Because the state is dominated this small elite group, any external economic shock will lead to a ‘voracity effect,’ where this imbalance of wealth distribution is exaggerated, and the state sees a reduction in its growth (Tornell & Lane, 1999). In the long term, this means that the population reduces levels of consumption, often crippling local industries. And thus, the rentier state continues to entrench itself through these mechanisms, remaining dependent on rents.

The Commodity

Commodity or natural resource extraction is most usually exported in a relatively raw form, there is very little processing or refining is done in the exporting state. This is exemplified by the relatively low refining capacity for crude oil in the Middle East when compared to Organization for Economic Co-operation and Development (OECD) nations. But raw exports can include such products such as oil, coffee or diamonds. Exports of agricultural goods are not considered to pose the problem of resource dependence as natural gas or crude oil might. Agriculture comes with significant economic multipliers by the large dedicated workforce needed to harvest the crops, a much larger multiplier than crude oil or diamond extraction. Rents are problematic for economic growth as extracting and exporting commodities requires relatively low skills and the surrounding industries have very low multipliers on the economy (Deaton, 1999). This is to say that the nature of the extractive industries is such that there are not significant supplementary industries that arise from commodity exporting. In contrast, manufacturing sectors creates a plethora of jobs that then, in turn, need other goods and services, greatly growing the economy. Yet extracting
and exporting commodities rarely needs a skilled workforce, and when it does, it is often outsourced. For instance, oil drilling requires highly specialized workers usually imported from rich countries to manage operations and service high tech equipment. This transplant workforce spends little inside the country and send a large amount of remittances back to their homes. And because the oil is usually refined off-site, the valuable value-added jobs are not lacking in the rentier state. Thus, very few workers benefit from the oil industries established in rentier states. Other commodities fare no better, the low skill required to harvest coffee, or the low-tech methods used to mine diamonds and gold keep wages low (Deaton, 1999).

Commodities and Rentier States

“A Rentier, is thus more of a social function… though he does not participate actively in economic production, receives nevertheless a share…” (Beblawi, 1987). In his book, ‘Open Veins of Latin America,’ Galeano diligently records the history of rentier states in Latin America, their institutional histories beginning as extractive Spanish colonial holdings (Galeano, 1997). The resource rich region of Latin America is plundered and substantial amounts of resources, especially silver, is shipped to the Iberian Peninsula. He also notes the negative effects the large quantities of Silver had on the Spanish mainland, its economic development stifled by the subsequent quantities of foreign imports. Without creating its own industries, Spain found itself dependent on imports bought with its silver. Spain’s dependence on colonial silver is partially to blame for the relatively poor economic development when compared to other Western European states (Galeano, 1997). But the brunt of the negative effects from the rentiers lay on the Latin American colonies. Designed to be extractive, the institutions that were established in the state fixated around a single purpose: exporting natural resources. Farms once productive with food staples were instead turned to produce commodities such as sugar or tobacco. A native population that once grew and produced everything they needed to survive suddenly had to purchase expensive food imports, increasing their dependence on the extractive mechanisms (Galeano, 1997).
It is important not to confuse resource extraction and the rentier state. While all rentier states depend on resource extraction, not all states which extract resources are rentier states. For example, Saudi Arabia is widely considered to be a rentier state due to the government’s dependence on oil production for income. However, the United States is a much larger oil producer, but the income from oil production is not only indirect, but also very marginal to government income (World Bank, 2014). Thus, rentier states are generally low- or middle-income countries due to the nature of exports. As the country is not wealthy (or less often, large enough) to consume their natural resources, they export. This creates a self-selection bias of rentier states, and there is a strong relationship between low country wealth and resource exports. Thus what sets rentier states apart from resource extraction or resource dependence is first, the export of natural resources and second, the substantial rents collected by the government.

Resource Curse (The Paradox of Plenty)

David Ricardo famously said the following regarding Spain and Portugal’s mining of Gold and Silver:

“This increase in the quantity of those metals, however, has not, it seems, increased that annual produce, has neither improved the manufactures and agriculture of the country, nor mended the circumstances of its inhabitants. Spain and Portugal, the countries that possess these mines... are perhaps the two most beggarly countries in Europe” (Ricardo, 1817).

In his stinging critique of rentier behavior, Ricardo notes not only the lack of economic improvement, but also other industries that are stifled. While not absolute, the Resource Curse is a series of trends that tend to occur to rentier states, often negative. However, what negative effects and to what degree differ wildly from state to state.

Effects of the Resource Curse

The most widely documented effects associated with the Paradox of Plenty is the ‘Dutch Disease,’ or the tendency for authoritarianism and poor economic development. The Dutch Disease refers to significantly appreciating exchange rates partially due to large exports
As the Spanish found out with their large quantities of Silver, the subsequent dependence on imports worked against the health of the overall economy. ‘Dutch Disease’ was named after the phenomena occurred in the Netherlands during the second half of the 20th century, wherein they found enormous quantities of natural gas in the Groningen province and its subsequent export. By exporting such large quantities of the natural resource, the exchange rate of the Dutch Guilder appreciated. Thus, it became relatively more difficult to export Dutch manufactured goods, as the stronger Guilder allowed relatively cheaper foreign goods to flood the markets. As a result, considerable manufacturing sectors were damaged and the economy as a whole became more dependent on imports. These negative effects work twofold as it not only becomes harder to export non-commodity goods and services, but domestic firms must also compete harder with cheaper foreign imports. This industry destruction and market disruption often forces increased social spending by the government to help cover losses (Corden, 1984). The ‘Dutch Disease’ is widely credited for beginning the demise of the Dutch manufacturing sector which remains weak to this day.

Institutional preference for the rentier activity is also reinforced in this mechanism. As other sectors of the economy weaken, the institutions surrounding oil production and export strengthen. For example, when Venezuela began exporting oil, the state apparatus began to make this process more efficient, but in doing so made other industries far less so. Prior to 1912, Venezuela had relatively standard land ownership laws, not dissimilar to those found in Western countries. But in 1912, at urging from the oil-friendly administration, the Supreme Court ruled that only the state had the constitutional right of dealing with foreign companies to extract and process natural resources. This had sweeping effects on a wide array of other industries in Venezuela and overnight, the value of land dropped considerably (Karl, 1997). In another example, President Juan Vincente Gomez chose not to devalue the Bolivar following U.S. currency shifts as it would hurt the country’s oil revenues due to the oil markets being denominated in dollars (Karl, 1997). These changes made it much easier to extract and export oil, while degrading the fundamental institutions that allow for other industries to succeed.
These illustrative examples shed light on how institutional apparatuses build around and protect the rentier activity, often at the expense of other economic sectors. This introduces another element to rentier states. All governments reap the rewards of resource extraction, whether it be from relatively indirect methods such as general taxation or direct methods such as collected rents. States whose treasuries depend on rents imposed on their commodity exports find budgets are directly linked to market forces and international political considerations. When fiscal policies, such as welfare spending or infrastructure projects are undertaken, they are largely funded through rents placed on exported commodities. This can leave the treasury ill equipped in the long run as commodities are highly volatile and prices are difficult to predict. This results in fiscal policy that is at the mercy of global commodity prices. The potential for disaster has been well documented. As mentioned in the preceding section, governments of rentier states are more likely to increase spending to make up for poor growth in other industries. But when governments are dependent on volatile commodities, Keynesian economics is difficult to accomplish. Low prices of oil have the power of spinning rentier states into recessions, and with diminished fiscal capacities, their governments find themselves unable to provide increased spending to mitigate the damage. The Shah of Iran began ambitious public work projects, fueled by the increase in oil prices during the OPEC embargo. However, by 1975, the demand for Iranian oil had declined and many of these projects were scrapped mid-completion. The sudden surge of unemployment left a large population of unhappy citizens which is widely credited as a driving factor of the Iranian Revolution in 1979 (Skocpol, 1982).

Unhealthy Path Development and Authoritarianism: A reinforcing mechanism

The resource curse also encourages an unhealthy development path of resource extraction. This development path is greatly entrenched if a strong centralized industry has considerable sway with legislatures, which primarily occurs when states are new and weak. The problem is even more confounded if the state apparatus is directly dependent on the oil rents. Venezuela at the beginning of the 20th century was marked by oil companies dictating legislature and policy of the state (Karl, 1997). Once development paths are
established, it becomes difficult to retrain the economy to change. The problems with this regulatory capture are evident, the state becomes very ineffective at managing the country when institutions and laws are so focused on resource extraction and rents. The source of income for the state directly shapes its nature. Despite the negatives of rentier behavior, Venezuela could not afford, nor had the will, to stifle their primary source of income and economic growth. This sheds light on the deep and thorough changes within the state apparatus, often to ensure they are involved in the collection and distribution of the rent (Beblawi, 1987). The rentier state draws together a problem that inclusive governments try to avoid, the separation of economic and political power. Without this distinction, the narrow economic powers which control the means of rent extraction can only too easily set the tone for government (Reich, 2016).

Authoritarian dexterity is also an unfortunate side effect of the rentier state. The presence of oil wealth in a state seems to halt its transition to democracy (Ross, 2013). Authoritarian states with natural resource wealth have funds to pay off dissenting elites. There are also many additional mechanisms which help authoritarianism prevail. First, the international community often seeks to ensure the stability of major resource exporters as any threat to the government apparatus could lead commodity prices into excessive volatility. This includes allowing authoritarian regimes to survive and maintain control in the region, potentially going as far as selling them advanced weapons. Second, the authoritarian leaders have access to considerable wealth which they use to encourage ‘citizen cooperation.’ Subsidies and large social programs can be enacted to ensure broad citizen support for the regime. Resource wealth allows governments to disburse significant funds to maintain power, whether it be through employing economic incentives or to fund coercive means. Dissident groups can be bought out, rival tribes can be given important roles within the state apparatus. The Government has the funds to purchase and maintain large and advanced militaries. Thus, through a wide range of tactics, paid for by resource rents, authoritarian regimes are able to maintain their grip on power by avoiding necessary structural changes.
The Problem of Windfalls: Economic Shocks on Young Institutions

Windfalls also have drastic effects on rentier states afflicted with the resource curse. The dynamic of rent windfalls alters how states view risks and how they seek to maximize profits. Hazem Belblawi notes that, “The basic assumption about rentier mentality and that which distinguishes it from conventional economic behavior is that it embodies a break in the work-reward causation. Reward-income or wealth-is not related to work and risk bearing, rather than chance or situation” (Belbalawi, 1987). Belbalawi further clarifies this ‘contradiction,’ by noting that profit motives in rentier states are “accidental” whereas profit collection in states without rents are based off a diligent work structure augmented by inclusive institutions and laws. The easily accessible wealth seems harmful to work ethics and greatly reduces innovation and entrepreneurship. Despite initial short-term gains, windfalls have an overall negative effect on the state in the long run. Spikes in commodity prices are often sudden and temporary, and most importantly unpredictable. Yet, such events fill the coffers of rentier states through random chance. For example, Venezuela throughout the 1960’s and 1970’s found itself with a fiscal budget ten times larger than before the previous decade (Karl, 1997). This led to greatly increased welfare spending, infrastructure projects and generous foreign aid. Similarly, Egypt found itself in a similar situation in the 1860’s when the price of its primary export, cotton, quadrupled (Deaton, 1999). In Egypt, large and often unnecessary, infrastructure works were undertaken paired with a large military buildup. Great works such as the Suez Canal was built during this time period, yet many other projects were unnecessary and wasteful. But in both cases, after initial periods of boom, the price of the underlying commodity dropped. And this drop was devastating for both countries. Venezuela saw massive political turmoil and economic crises raging through the 1980’s and 1990’s. Egypt saw its leader lose power, and foreign, primarily British, interests taking over the country, even commandeering the Suez Canal.

Avoiding the Resource Curse

While windfalls do have potentially destabilizing effects, responsible states may be able to avoid some of its negative effects. Historically, storing windfall wealth into sovereign
wealth funds has proved effective in mitigating side effects. This reduces the risk of Dutch Disease and helps ensure the state is not dependent on temporary income, storing the excess in a fund that can be used in economic downturns or slumping commodity prices. The inability for states to stash windfall wealth in such a device is often due to political forces. Governments of rentier states are acutely aware of their precarious situation, they are rarely entrenched in their citizens lives and can struggle with legitimacy. Rentier states primarily reap rents from mineral extraction, often sideling the citizenry. This mechanism is relatively easy to take over, thus rival groups have a large incentive to dislodge the incumbent party and take control of the rentier apparatus. This encourages states to expend resource windfalls on projects that solidify their popularity with the populace. But what might be reasonable in the short term is harrowing in the long term. By spending large windfalls, the state apparatus often becomes dependent on this one-time wealth. This is not always the case, and countries such as Norway have established large sovereign wealth funds. This hints at the importance of institutional strength and the inclusiveness of the political apparatus for determining the outcomes of rentier states. But while commodities seem to have negative effects on institutions, it is important to consider that, “commodities in themselves are not creative or destructive forces, and major explanatory power cannot be attributed to their particular character alone or even to the economic dynamics they encourage” (McNally 1981). Thus, it is more appropriate to say that the effects commodities have on a state and its institutions depend on the type of state and the quality of institutions themselves. But do these windfalls help or harm the citizens living within the country? There is evidence from Brazil suggesting that while social spending does increase from oil rents, much of the claimed stimulus is never put into play, hinting that corruption plays a large role in rentier states (Caselli & Michaels, 2013).

Volatility

A confounding factor for rentier states is the instability of a commodity price and the government. For example, the underlying price of the exported commodity can be highly volatile on a day to day basis, mostly set by global market forces. Oil prices fluctuated from
150 basis points to 70 and back to 120 throughout the 1970’s. Government expenditure of OPEC countries during this time also fluctuated heavily, indicating that these states were largely dependent on this volatile commodity (World Bank, 2017). But the state apparatus in many cases are also relatively unstable. Because of the mechanism of control over the rentier apparatus, and their lack of involvement in economic and political institutions, extractive regimes have a history of being deposed and face constant threats for government change. This is largely due to the fact that they exclude large portions of their populations from economic and political participation, lowering the states legitimacy. Politics tend to be short sighted, and often states pursue policies that are detrimental to the long-term health of the economy. No dictator prioritizes his countries long term growth over control of the state.

Thus, the risks to rentier states stems from the apparent contradictions present in certain types of rentier states. While these paradoxes are not guaranteed for every rentier state, there have been several strong trends documented in the academic literature.

**Basic Definitions (Recheck essay and what I wrote here to ensure homogony)**

In sum, resource dependence occurs when a state’s economy is dependent on resource extraction and commodity exports. This can lead to suboptimal symptoms such as prioritizing resource extraction and their profits being funneled into the government’s treasury. These symptoms are systematic to a problem more severe than resource dependence. When a state begins to prioritize resource extraction for its own welfare, often at the expense of other economic sectors, it is characterized as a ‘Rentier State.’

When commodity exports represent a large portion of the economy, ‘Dutch Disease’ may become present. Due to the large scale of commodity exports, the local currency is strengthened in comparison to foreign currencies. This makes it relatively more expensive to export other goods and services, while at the same time making it cheaper to import. Thus, inadvertently, domestic exporting industries can be stifled. Even firms who do not export may be put out of business by relatively cheaper imports in domestic markets. Thus, countries that primarily export commodities are at risk of marginalizing their other
industries. This is important as commodity extraction is generally a low economic multiplier and has relatively little effect in adding jobs. This means that commodity extraction is generally accomplished by a small group of individuals, and the profits are distributed to an even smaller group.

While not absolute rules, these negative general effects associated with dependence on commodity exports are considered to be the ‘Paradox of Plenty,’ (or resource curse) or the irony of generating tremendous wealth yet making a state poorer in the long run.

**MENA Region**

This paper focuses on 19 states within the Middle East and North Africa (MENA) for the regions of analysis. Various factors make this an ideal region for study. The single most valuable and abundant commodity in the region is crude oil, and a number of MENA states depend on its exports for revenue. Furthermore, oil has the benefit of being exceptionally well documented in regard to its level of production and price. Other commodities, such as wood, diamonds and gold, can be more easily smuggled or go unreported. Additionally, many states in the MENA region are highly dependent on oil exports. By examining extreme cases where a high value commodity is responsible for a substantial portion of the economic growth, rentier behavior and its effects are more easily analyzed. We also avoid differences in the type of commodity rent as nearly all the rentier states in the region primarily export oil. For example, rentier institutions surrounding diamonds may be different in nature than the ones established around oil exports. The effects of rent-seeking in developing states with more diverse economic activity is not only difficult to observe, but it is also less likely to occur. Thus, by studying a region that primarily exports oil, we are reducing the possibility of missing crucial rentier behaviors. This entire region is not uniformly dependent on oil, there are a few diverse economies that are not dependent on oil revenues or primarily export commodities. But the dominance of oil in the region is a strong common denominator. Roughly 7 of the 19 states have low levels of economic dependence on oil rents. Thus, we are able to examine the variances in oil dependencies and institutional age.
The states in this region have similar histories, languages and cultures. They have almost all been Ottoman provinces before being transferred to UK or French protectorate status following the first world war. The majority of the region speaks Arabic and practices Islam. While differences do exist, and are important, their similarities make for a relatively homogenous region that can be analyzed with minimal noise. Because of their similarities, any cross-state examination can better capture the effects of the resource curse and resource dependency. Thus, any differences can be more firmly accredited to differences in institutions and oil presence rather than another confounding variable.

<table>
<thead>
<tr>
<th>State</th>
<th>Rents as a % of GDP in 2005</th>
<th>Year State Entered into COW interstate system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>24.4%</td>
<td>1962</td>
</tr>
<tr>
<td>Bahrain</td>
<td>5.8%</td>
<td>1971</td>
</tr>
<tr>
<td>Egypt</td>
<td>13.9%</td>
<td>1855</td>
</tr>
<tr>
<td>Iran</td>
<td>32.2%</td>
<td>1855</td>
</tr>
<tr>
<td>Iraq</td>
<td>64.1%</td>
<td>1932</td>
</tr>
<tr>
<td>Israel</td>
<td>0.0%</td>
<td>1948</td>
</tr>
<tr>
<td>Jordan</td>
<td>0.1%</td>
<td>1946</td>
</tr>
<tr>
<td>Kuwait</td>
<td>54.7%</td>
<td>1961</td>
</tr>
<tr>
<td>Lebanon</td>
<td>0.0%</td>
<td>1946</td>
</tr>
<tr>
<td>Libya</td>
<td>59.5%</td>
<td>1951</td>
</tr>
<tr>
<td>Morocco</td>
<td>0.4%</td>
<td>1847</td>
</tr>
<tr>
<td>Oman</td>
<td>44.7%</td>
<td>1971</td>
</tr>
<tr>
<td>Qatar</td>
<td>40.7%</td>
<td>1971</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>50.2%</td>
<td>1927</td>
</tr>
<tr>
<td>Syria</td>
<td>25.0%</td>
<td>1946</td>
</tr>
<tr>
<td>Tunisia</td>
<td>4.1%</td>
<td>1825</td>
</tr>
<tr>
<td>Turkey</td>
<td>0.3%</td>
<td>1816</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>24.8%</td>
<td>1971</td>
</tr>
<tr>
<td>Yemen</td>
<td>40.7%</td>
<td>1967</td>
</tr>
</tbody>
</table>

*Figure 1: States analyzed in the MENA region and their accompanying levels of Rent and entrance in the COW system. The COW system begins in 1816. The West Bank and Palestine are notable exceptions in this analysis, due to a lack of data.*

Figure 1 above notes the countries analyzed, and the level of oil rent as a percent of GDP in the year 2005. The year 2005 was selected due to the complete availability of data and because it was prior to the 2007 Great Recession. The years on the far left indicate which year the state was entered into the COW Interstate System, a metric which
indicates what year the states were able to command complete control over their state apparatus. The system begins in 1816, and thus if the state was acting independently prior to this date, is marked as 1816.

The remainder of this paper analyzes the link between these two factors in these states. We examine the effects of a large economic shock that has shaped the institutions of a majority of these states and its relevance today.

Paradox of Plenty

The negative effects of the rentier state are numerous and severe. Most resource dependent states should do well to avoid this status. But when looking at development outcomes from the second half of the 20\textsuperscript{th} century, many seem to have fallen into this trap. In oil exporting states, figures from which are easy to track and reliable, show the poor development outcomes that are apparent in the second half of the 20\textsuperscript{th} century. This is not to say that these oil exporting states are better or worse off, but rather that they are far from achieving their potential economic growth. Many of these resource dependent states find themselves trapped in the middle-income status. The volatility of oil prices throughout the second half 20\textsuperscript{th} century is impossible to ignore. And yet, very few oil exporting countries worked to avoid these well documented pitfalls. The similarities between the oil exporting states often ends at the oil exports. The geographic size, populations, government types, institutional histories and even location are varied and diverse. Venezuela, for instance, has few historic similarities with Saudi Arabia. And yet the majority of these states show similar symptoms of the resource curse. Juan Pablo Pérez Alfonzo, an oil czar and OPEC champion, once quipped that they had become more like Saudi Arabia than Brazil, calling the state, “Venezuela Saudita” (Karl, 1997). How can two countries, on opposite sides of the world and with shockingly different histories have such similar outcomes? The answer seems to be partially related with the youthful institutions of the countries at the discovery of the vast natural resources. In both cases, large foreign oil interests operated at a time where the countries institutions and government were very young (Karl, 1997). And without any other strong industries or a developed economy, oil interests were more easily able to have
considerable influence on laws and institutions. The prospect of large rentier revenues was too great for the majority of developing economies to pass up. The relatively late arrival of both Venezuela and Saudi Arabia into the international community, paired with a price shock in the 1970’s, was disastrous in the long-term health of these countries. This is not only the case of oil exporting states, numerous developing resource- exporting states find themselves at the whims of large corporations.

Institutions and Levels of Rent, a Relationship

This paper seeks to link the relationship between the age of institutions and their dependence on resource extraction. Due to the factors mentioned in previous sections, including dynamics surrounding the resource curse, rentier behavior is sub-optimal for long term economic growth. Yet countries seem unable or unwilling to stop their slide into this behavior. Because rentier states effect the quality of institutions, any measure of institutional quality will be burdened by the strength of the rentier state. This was highlighted by examining oil price fluctuations and their effects on countries polity scores. It was discovered that increasing prices of oil trigger movements towards greater authoritarianism (Caselli & Tesei, 2016). While many prior papers use measures of institutional quality, this paper uses institutional age as a concrete figure that is unaffected by the effects of the rentier state. This paper links institutional age, in years, to a country’s level of resource dependence. Institutional age was determined to be when states were in direct charge of their international and domestic affairs. This distinction was made because the French and British protectorates were deprived of international diplomacy making and military and were forced to accept European control on these issues. Thus, institutional age is counted starting from a state’s entry into the COW Interstate System. Yet using institutional age poses other problems, it is far from a perfect measure. This measure ignores the various rates of which institutional development occurs, and the variations across a wide range of countries. For example, Saudi Arabia prior to the discovery of oil had a tiny population and a very small economy, leading to negligible institutions. However, Venezuela in the same time period had over 2.5 million inhabitants and had an economy highly dependent on agricultural
exports. Thus, there is great variation within rentier states which the institutional age metric does not capture. Factors such as different levels of wealth, difference in laws and property rights, degree of authoritarianism, size and population are sidelined.

There is little coincidence that the majority of rentier states have developed from colonial holdings. The large shift towards colonial independence did not occur until the 20th century, the same time period many states in the MENA region gained independence. It is important to note that former colonial holdings have considerable institutions for resource extraction and export. The many institutions established, and often lasting, have negative effects on long term growth. Englebert (2000) found that African states whose institutions found legitimacy in their pre-colonial institutions were more likely to have higher levels of state capacity and growth. While the majority of examined states have a colonial background of extraction, there still remains variance in the degree of resource dependence. Some, under the Ottomans, had considerable autonomy over their institutions, while others did not. Other states in the region have especially unique histories, such as Iran which has never been colonized. Accordingly, analyzing the variations in institutional age from independence might explain at differences in resource dependence. Other factors may also play key roles, for instance if the road to independence was violent or peaceful, and what country independence was gained from. Such statistics can help predict the level of dependence a government has on its resource extraction.

Analysis

Oil rents are the difference between the cost of extraction, including a rate of return, and the market value at regional prices. Thus, these are essentially the wealth generated by oil-exporting states. Because of the accessibility of data and its relative accuracy, oil rents were selected to be studied. Due to its high number of oil exporting states, the 19 countries from Middle East and North Africa (MENA) region are most examined in this paper. First, the levels of oil rent are abnormally high in the MENA region, averaging 19.44% of Gross Domestic Product (GDP) between the years 1974 and 2012. Coincidentally, the World Bank
designated ‘Fragile and Conflict State Index,’ posted an average oil rent to GDP of 14.1%. For comparison, during this same time period, the world average for rents was a paltry 1.64% of GDP. This illustrates how fragile and conflict states tend to be those who depend on oil rents, showing how rentier states tend to be illegitimate and prone to political turmoil.

This seems to imply a few theoretical assumptions. First, there is an exceptionally high dependence on rents in the MENA region. So, while oil rents might report an average of 19.4% of GDP for the MENA region, it accounts for a much higher amount of state revenue, figures for which are often obfuscated and distorted in official reports. It also shows how minor oil rents are on the global level, the richest countries rarely generating rent. But this is a distortion of rich states and the general lack of rentier structure on the world stage. Even middle-income states, which post relatively strong economic growth, avoid resource rents. Despite this, for many developing countries, rents are an essential part of government revenue, but this is not the case for more advanced economies. Additionally, the oil rent to GDP ratio for World- Bank designated ‘Fragile and Conflict States,’ received on average 5.3% less than their Middle East peers. This suggests that states that have smaller rentier incomes are more prone to regime change and instability. It also implies that authoritarian states in the Middle East and North Africa are more durable because to their higher oil rents, confirming the theory proposed by Brownlee, Mosoud and Reynolds (2013). It is important to note that ‘Oil Rents as a percentage of GDP’ has little to do with output, but rather
institutional and state structures. For example, while the United States is currently the largest producer of crude oil, it collects essentially zero rents, opting to capture profits through general taxes instead. A ‘rent’ is most often referring to direct payments made to the state apparatus which is calculated as the difference between the cost of extracting the resource and the price of the oil in the markets. The growth of oil rents as a portion of GDP in the 2000’s hints at the inability of the region to develop other economic sectors, even when the price of oil plummets. This points to the institutional stickiness which was developed in the 1970’s oil shock.

Figure 3 has some negative implications. If the oil rents to GDP ratio fluctuates, this indicates that either oil prices or the Gross Domestic Product of MENA countries is very volatile, if not both. But in many states, government expenditures in rentier states are closely tied to the level of rent extracted (Skocpol, 1982). With rent to GDP fluctuating so much between 1974 and 2012, further analysis of oil price to GDP is warranted. Between the years 1988 and 2017, the nominal Gross Domestic Product of the entire Middle East and North Africa region correlated with the Brent Crude Spot prices at R= 0.44, as illustrated in Figure 3. When examining the graph, the relationship between changes global price of oil align very closely with changes in the nominal GDP (nGDP) of the MENA region. Paired with Figure 2, the dependence rentier states have on the global commodity prices become visible. Coincidentally, expenditures of states, dependent on natural resources for income,
fluctuate closely to the commodity price fluctuations. This confirms that markets determine the economic well-being of these oil dependent states.

Are having high levels of rent bad for economic growth? What correlations do real GDP growth have with levels of Oil Rent?

![Figure 4: Relationship between average real GDP growth and level of oil rent as a % of GDP for years 1989-2016. This time frame was selected due to availability of data. Data from World Bank.](image)

Figure 4 shows the negative relationship between real GDP growth and the level of rent derived from Oil. There is negative correlation between the two variables of -0.467. This shows that there is a relatively strong and generally negative relationship between the two factors. This graph reveals how the level of oil rent in 2005 in relation to the average growth of GDP has a considerable negative correlation, states highly dependent on oil rents generally fared poorly. The year range was selected for the most complete availability of data in the MENA region.

But while the MENA region as a whole has a GDP to Brent oil price correlation of 0.44, individual states have more varied relationships between the two variables. For example, between the years 1988 and 2017, Saudi Arabia has a resoundingly strong correlation of 0.87. But during the same time period, Israel, a nearby neighbor, only posted a correlation of 0.33 between the same variables. While this may be an extreme example,
it illustrates the diversity of economic backgrounds of the various states in the region. But what explains this massive variation?

Figure 5: Negative relationship between years since independence and oil rents as % of GDP in the MENA region. Years chosen due to the complete availability of data. Data from World Bank and ICOW Colonial Database.

For all MENA states, institutional strength, measured by years since entrance in the COW interstate system, was plotted and correlated against the level of oil rents they extracted as a percent of GDP. Years since independence, measured from year entered into the COW system, was used as a less subjective measure of institutions. This is possible due to the institutional drift and the progressive development of institutions. As time progresses, institutions are more likely to strengthen and entrench themselves. Institutional age becomes a poor measure in states that have massive demographic changes after the resource is found. For example, oil discoveries invited millions of individuals into the sparsely populated desert, any original institutions may have been overwhelmed and sidelined.

Yet, the correlation between the crude institutional age and level of oil rent extracted is -0.453. This is rather high, considering that only years since independence was considered against levels of rent generated. It would appear that institutional strength, as measured in terms of how long the institutions existed is a moderate predictor for level of rentier state. More importantly, this relationship is far clearer towards the end of the oil rentier spectrum. That is to say above a 25% level oil rent to GDP, institutional age seems
to be very linearly related to the level of oil rents collected in MENA states in 1990. Natural resources, or at least oil, seems to put institutional strength under duress as there is a negative relationship between institutions and high levels of rent extraction. In states that extract less than 25% rent, there does not seem to have an especially clear relationship with institutional age, yet the trend remains negative. However, for states that extract more than 25% rent, the relationship seems to be resoundingly negative.

This paper assumes that the year of COW entrance causes a near wipeout of institutions and generates a fresh set. While there are inevitable changes, the degree of institutional change is dependent on a wide and complex series of factors. There does seem to be some data that implies a deeper institutional history has a considerable role. Using the ICOW colonial database, which indicated which colonial power had the most development impact in the development of a state’s institutions, the relationship of level of rentier state to institutional age was analyzed.

<table>
<thead>
<tr>
<th>Correlation Table between Country Group Institutional Age and Level of Rent as % of GDP</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENA Countries (n=19)</td>
<td>-0.453</td>
</tr>
<tr>
<td>Ottoman based Institutions (n=9)</td>
<td>-0.264</td>
</tr>
<tr>
<td>United Kingdom based Institutions (n=5)</td>
<td>0.743</td>
</tr>
</tbody>
</table>

This table is a correlation between oil rents and MENA states grouped by their colonial histories. The analysis shows slightly less negative correlations between the level of rentier state and age of institutions for states with primarily Ottoman developed institutions. But the states with institutions developed primarily by the United Kingdom showed significant and a surprisingly positive correlation between the same two variables. This has a few implications, for example, prior colonial history in fact does make a difference on level of rent. But more interestingly, it also implies that the institutions developed United Kingdom were designed to be extractive, and the longer the institutions
age, the higher the level of rent is in the state. Threats to this tables validity include the possibility that the UK colonies were established on especially oil rich territories.

**Conclusion**

Rentier states and the paradox of plenty are a perplexing economic case. The idea that a nation riddled with wealth finds itself with worse development outcomes than its middle- or high-income peers is striking. But through entrenched institutions, corruption and the stifling of domestic industries, the state can become dangerously reliant on volatile goods. There are clear and well understood mechanisms to avoid this curse, such as the development of sovereign wealth funds. But to make these policies effective, the state needs a strong will and an eye for the long-term economic health of the country. Many rentier states lack both.

There does seem to be a relationship between institutional age and the level of rentier extraction. Any government depending on a single source of income, especially commodities, often finds itself in a precarious financial situation. When that resource is something such as petroleum, its volatility is difficult to manage even for the most effective state apparatuses. For countries with weaker governments and institutions, the fluctuations can be devastating. The 1980’s and 1990’s are rife with examples of rentier states losing large amounts of revenues and subsequently witnessing large uprisings and challenges to status quo power. Using historical data, we have shown the dependence that rentier states have on global commodity prices. In cases such as Saudi Arabia, global oil price fluctuations have the exceptionally high correlation with its Gross Domestic Product of 0.88. Furthermore, the higher levels of rent present convincing correlations for lower economic growth. The origin of colonial institutions further also shows a role played in development and seems to play a role in establishing rentier states.

There are clear geo-political considerations that have been outside the scope of this paper. These should play a large role in resource dependence but were not considered. Furthermore, the causes and histories price shocks of the commodity were not diligently analyzed. There are occasionally political considerations behind such price shocks, with
the 1973 oil embargo being the most severe example of this. However, as this paper sought to examine the resource curse and its relationship to institutions, and the political histories of price shocks were out of depth of this study.

There is little doubt that many states afflicted by the resource curse are still better off with the mismanagement of their resources than without, strictly in economic terms. Gross Domestic Products are generally higher than their neighbors and standards of living are often better. But it is the surprising lack of growth, due to ineffective and entrenched institutions, which is the main result of the resource curse.

Additional research should be conducted on a greatly expanded band of states. Whether it be all oil exporting states, rentier states, or even all states, measuring country success based on institutional history add greatly to our understanding of institutional precedent and influence over time.
Citations


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