Being rich in energy resources – a blessing or a curse

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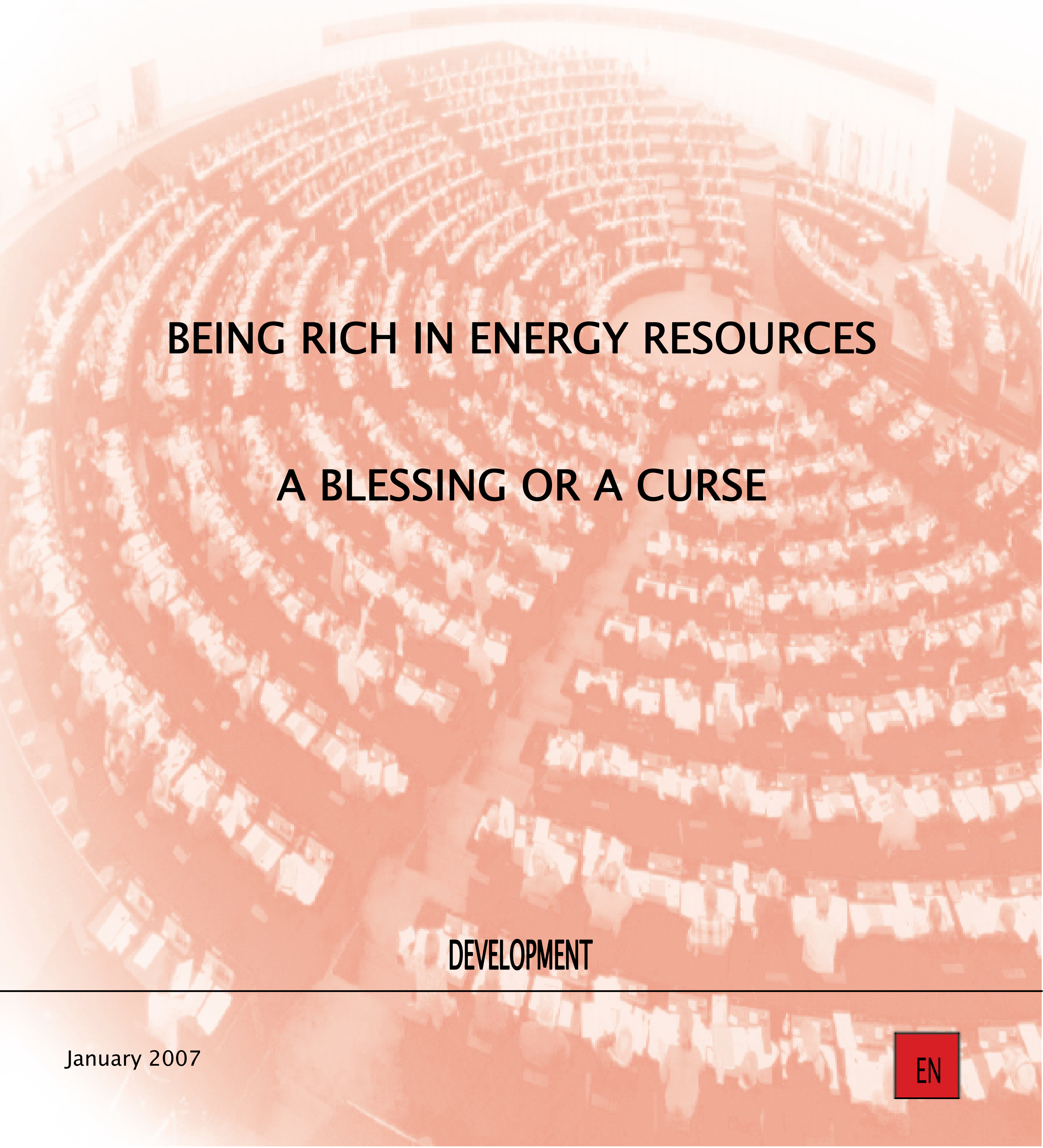
STUDY

Policy Department External Policies



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DEVELOPMENT

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Abstract:
"Being rich in energy resources – a blessing or a curse" finds that an energy resource curse plagues many EU supplier states. This in turn directly affects Europe's energy supply security and threatens to engulf Europe in unwanted hostilities at home and abroad. The study addresses seven issues including the evidence suggesting that a curse exists among Europe's external energy suppliers, active programs to limit that risk, the significance of economic diversification, the applicability of dividend programs, the link between corruption and security of energy supplies, additional possible actions of the Union, and further threats posed by resource cursed countries. It establishes a definitive links between corruption and supply security, poor transparency, and inequality, and proves that a low level of economic diversification is a reliable indicator for the existence of the curse. It also finds that there are examples of excellence in recovering from and even converting the curse to a blessing. In looking at the policy instruments available to the Union, the study determines that the Union does have the technical expertise and financial means to restructure political and economic systems and strengthen public administrations and institutions and found that Europe's successful implementation of similar past programs could be taken, at least in part, as models for future efforts. Finally, the study recommends the controversial approach of conditionality in the use of aid and finds that the Union should legislate standards for the reporting and auditing of energy exports and imports at home and abroad.

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Introduction

Is being rich in energy resources is a blessing or a curse? One would be inclined to think that vast resource wealth is a nation's ultimate treasure, a public good that when managed to the benefit of a nation's citizen-stakeholders, should create rich, equitable societies with stable economies and high degrees of political participation. However, evidence suggests that in most cases, countries rich in resources suffer under authoritarian regimes, exhibiting high degrees of corruption, inequality, and political instability. This strange paradox is attributed to what is known as a resource course, an inverse relationship between resource wealth and economic growth, and the cause of a wide array of social and political inequalities.

As the Europe Union formulates its common external energy policy amidst unprecedented economic growth and stability, it increasingly is being forced to confront this phenomenon. Europe needs to guarantee supplies as well as maintain price stability. Doing so, however, may prove to be very difficult given the instable nature of its energy suppliers.

The following study was commissioned by the Directorate-General For External Policies of the Union within the context of planned public hearings of the European Parliament on the external aspects of the energy supply security and provides an analysis of the issues facing European policy makers. Noting the policy specific nature of those hearings and the summit, the proposed study identifies and evaluates obstacles and opportunities for an overall European external policy in the field of energy, and specifically the security of its supplies.

"Being rich in energy resources – a blessing or a curse" taps a deep reservoir of literature written about the resource curse. It incorporates the latest findings and statistics, and presents solid evidence that the resource curse manifests itself in a multitude of ways, demonstrating that many of Europe's suppliers suffer from low levels of democracy, a lack of economic diversity, high levels of corruption, low levels of transparency, dramatic swings in economic activity, and frequently fall victim to extreme political violence. It clearly identifies that the link between corruption and supply security is both associative and substantial.

Moreover, the paper investigates ongoing programs to reduce corruption and increase transparency as well as programs to save shares of resource export revenues for later generations, and the role of international organizations, financial institutions and the Union in support of such initiatives, identifying examples of excellence in recovering from and even converting the curse to a blessing. Complimenting that analysis is a discussion of policy instruments available to the Union, followed up with recommendations, consolidating them in the conclusion.

Furthermore, the paper addresses many of the finer points of the curse, including how a lack of substantial tax systems divorces governments from their populations, reducing political accountability and public participation, ultimately reducing individual and public rights in virtually every relevant category and definitively measures the significance of economic diversification in reversing the curse.

Finally, the paper will show that taken together, the forces at play in resource cursed countries both directly and indirectly affect the security of Europe's energy supplies and threaten to engulf Europe in unwanted hostilities at home and abroad.

Designed for policy analysis, "Being rich in energy resources – a blessing or a curse" is constructed as responses to seven distinct, yet interrelated, questions. The seven questions investigate:

1. The evidence suggesting that a curse exists among Europe's external energy suppliers,
2. Active programs to limit that risk,
3. The significance of economic diversification,
4. The applicability of dividend programs,
5. The link between corruption and security of energy supplies,
6. Additional possible measures the Union can take, and
7. Further threats posed by resource cursed countries.

By systematically addressing these issues, this study endeavors to elucidate what is otherwise an often-misunderstood phenomenon, and in so far as it is successful, provide European legislators and policy makers alike with the knowledge they need to secure the best interests of the Union. The questions and reposes follow.

Question 1: How strong is the evidence that an energy specific resource curse exists among producer countries with which the EU has or may soon have relations?

Despite its apparent contradictory logic, a growing body of literature increasingly indicates the existence of an inverse relationship between resource wealth and a wide array of social, economic, and political inequalities. Indeed, close investigation reveals a very disturbing picture. Oil and gas constitute at least thirty percent of total export revenues in some thirty-four less developed economies, none of which can be classified as democratic or free. Fuels constitute roughly half of Russia's export revenues and more than eighty percent of Saudi Arabia's, Libya's, and Iran's. These four countries collectively supplied more than half of Europe's oil imports in 2004 and only Russia demonstrates a semblance of democracy. And among Europe's top ten external suppliers of energy, only Norway can claim stable democratic institutions, yet even it suffers from a fundamental lack of economic diversity, a common symptom of the curse.

The resource curse manifests itself in a multitude of ways and, when combined, many indicators can be used to judge its effects. These include a low level of democracy, or as some like to say, a heightened level of autocracy, a lack of economic diversity, a high level of corruption often coupled with a low level of transparency, dramatic swings in economic growth, GDP and currency and in many cases extreme political violence. Extractive industries usually concentrate in limited geographic enclaves and skew political forces by concentrating power into the hands of a few elites. Countries rich in resources also tend to lack substantial systems of taxation, divorcing governments from their populations, reducing accountability. In short, in any given week, countries affected by the resource curse may be rich and stable on Monday and fall into crisis and chaos by Friday.

From a consumer's perspective, this translates into one important conclusion: suppliers of energy resources are rarely stable, politically or economically. How true is this among Europe's suppliers? Multiple recent disruptions of Russian energy supplies are indicative of the forces at play.

Some have argued that the motivating forces behind the dispute between Ukraine, Belarus, and Russia revolve around greed and a fundamental lack of foresight in negotiating and maintaining contracts, both typical curse-related consequences. Recurring violence in Nigeria has disrupted supplies and affected prices consistently in recent years, and it is very difficult to label either Iraq or Iran as a stable supplier. In cases where supplies are stable, such as oil supplies from Libya or Kazakhstan, governments are often autocratic and inequalities are strong. In fact, with the exception of Norway, and to a lesser degree Russia, all of Europe's external energy suppliers either are autocratic, economically undiversified, desperately unequal, subject to regular domestic political violence, or all combined.

The easiest way to determine whether Europe's suppliers are truly affected by an energy-specific resource curse is to look at two classes of closely related indicators, namely economics and politics.

The Economics of the Curse

The macroeconomic conditions present among resource rich countries are well documented. Most tend to exhibit deceivingly high GDP per capita performance. Their capital cities shine with magnificent buildings, wide streets, and fancy hotels. However, a brief trek away, there is often rampant poverty. Taking a step back and looking at the larger picture, one cannot miss the symptoms of the curse: a lack of economic diversity and a void of functioning taxation institutions resulting in gross economic and political inequalities, and stymied economic development.

Economic Diversity and Development

The lack of economic diversification is the most serious long-term manifestation of the curse. Diversification is an essential component to a stable economy. Without diversification, countries increasingly depend upon a limited income source, subjecting them to dramatic swings in commodity futures. In the case of oil, for example, at $60 a barrel this means wealth, at $20 it is a disaster.
Diversification promotes competition, inspires innovation, opportunity and investment, particularly of smaller business, the bedrock of a rising middle class. Countries awash in extractive industry exports focus all their efforts on that single economic factor. Workers rush to get jobs in the one related sector. The ones that succeed reap the benefits. Those that fail, however, quickly loose their only opportunity to generate an income and are relegated to a life as second or even third class citizens. This lack of labor and capital diversification is the death knell for any developing economy.

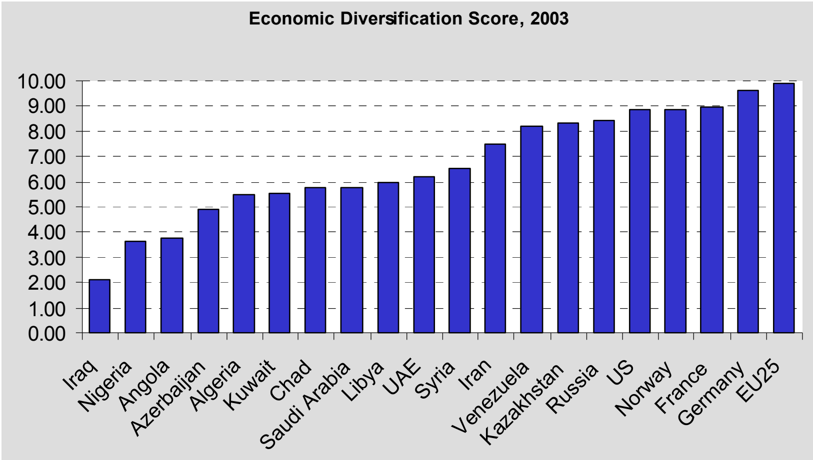
A lack of diversification also skews and often negatively affects real economic growth over the long term. Indeed, Terry Lynn Karl has shown that major oil producers such as Algeria, Angola, Iran, Saudi Arabia, Venezuela and even tiny Trinidad Tobago have experienced fundamental declines in per capita incomes in recent decades adding in a later paper that there are "almost no cases of successful development based on the export of petroleum."([1]) The numbers of people living in abject poverty in big oil-producing states like Nigeria, Venezuela, and Angola supports this argument.([2]) In short, energy and specifically oil exports does not easily translate into development.

Most countries that have come on-line in the last twenty years are exhibiting increased poverty, not less, slower growth, not more, weaker institutions, and regulatory frameworks, not stronger.([3]) Whether through legal rent-seeking means or illegal methods such as corruption, the vast infusion of energy-resource wealth and the politics that accompany it clearly tend to hamper economic, social, and political development.

As if the picture were not dark enough, volatility of commodity prices on international markets also lead to significant fiscal planning, spending problems and waste, ultimately leading to financial disaster when prices collapse, causing currency instability, hampering trade liberalization and dramatically reducing the quality of public spending.([4]) The unsustainably high revenues resulting from fuel exports can lead to Dutch Disease, a condition whereby high revenues raise exchange rates, promoting an adverse balance of payments on the cost of imported goods when prices fall, boosting wages for skilled labor, ultimately pricing them out of the international market, and reducing investment in other sectors. In short, it kills diversity and competitiveness, squeezing out vital sectors like agriculture and manufacturing, leaving the extractive industry as the country's only functioning revenue source. Just one example includes Gabon, which since initiating the export of oil has seen its agriculture sector collapse; it is now entirely dependent on imported food.([5])

European policy makers should keep a close eye on the level of economic diversification among its energy suppliers. Ultimately, this more than any other factor will determine the long-term security of their supply capacity. Luckily for Europe, its two largest suppliers are in fact quite diversified when compared with world average. Astrid Schuch, an analyst with Montana Capital AG, a specialized, independent structured credit manager (CDO manager) based in Vienna and a member of the author's research team developed a revealing scoring mechanism to measure economic diversity. By comparing economic activity with those of the world as a whole and holding global distribution of economic activity as a baseline, she was able to establish an economic diversification index based on the deviation of country's economic diversity when compared to the sector distribution of global GDP. On a scale of one to ten, with ten representing a perfect match with the world average, Russia and Norway both scored well above eight while Algeria came in at approximately five and a half as did Saudi Arabia, while Iraq barely crossed the two threshold. (See
Figure 1) For reference, The EU-25 scored the highest approaching ten and the United States almost nine.

Figure 1: Economic Diversification Score (EDS) 2003

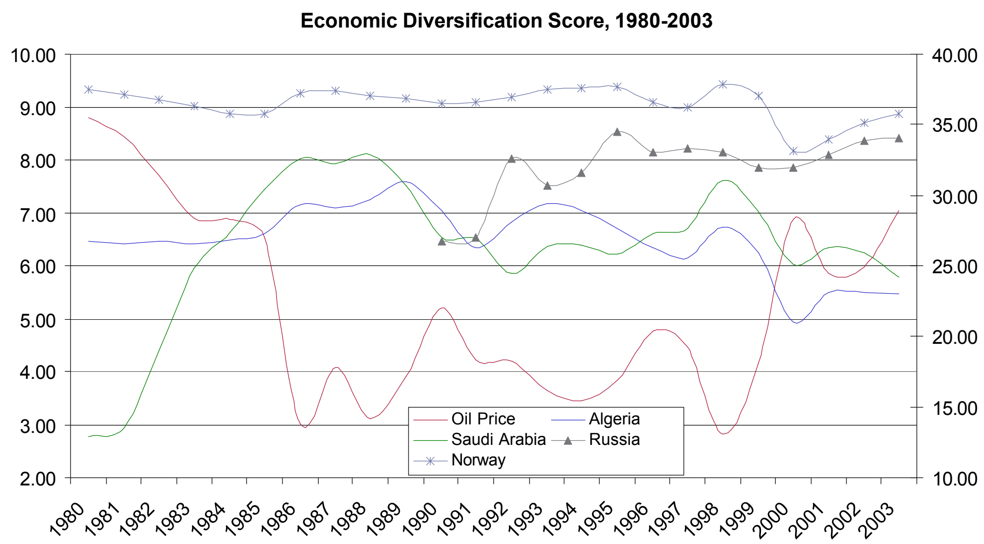


As the chart indicates, Norway and Russia are relatively diversified economies when compared to the world average. Industry, which includes mining and extraction, represented roughly 24% of global GDP in 2003, one third in Norway and a little more than quarter in Russia according to UNCTAD data. But in Algeria, Libya, and Nigeria, industry accounted for almost half of economic output.

The diversification of exports is another interesting indicator and for Europe's main suppliers much less flattering. Fuels accounted for roughly half of Russia's export revenues in 2004, sixty percent of those of Norway and Kazakhstan, over eighty-percent of those of Iran and roughly ninety-eight percent of related revenues in Algeria. All five counties rank among the key suppliers of energy resources to the European Union and all five are heavily reliant on that income. (See Appendix A: Economic Diversification Data)

Interestingly enough, Russia's EDS has improved since 1990 while Algeria and Saudi Arabia's have declined considerably. More interesting, however, when one compares economic diversification scores on one axis (left) against the price of oil on the other (right) over the same period, two clear trends emerge.([6]) (See Figure 2) First, the higher the EDS, the lower is its volatility. Second, economic diversity shifts inversely with the rise and fall of oil prices.

Figure 2: Economic Diversification Score vs. Oil



Take for example Norway versus Saudi Arabia. Norway maintained a high EDS across the observed period never dipping below eight with an annualized volatility of approximately 30%, as where Saudi Arabia exhibited wild fluctuations in its EDS showing a volatility of approximately 135%.([7]) Moreover, the image presented in Figure 2 clearly demonstrates that as the price of oil rises, economic diversity decreases and vice versa. Notice, for example, as oil prices declined between 1980 and 1986, low EDS Saudi Arabia, experienced a dramatic diversity increase. This is also true for Algeria, but to a lesser extent because its starting EDS was already higher. And if Algeria is observed over the periods of 1997-1999 as well as 2000-2001, one sees rises and dips inversely related to the price of oil. What distinguishes one country from another is not its independence from oil prices, but rather the level of its economic diversity before such shifts occur. More diversified economies are simply more resilient and stable.

Taxation

Unfortunately, diversification is only the tip of the iceberg. As economies skew toward dependence on high paying resource exports, two important phenomena occur. First, governments need less money from their citizens in order to finance the running of their respective countries. Second, decreased diversification reduces income sources for the population. Together these two factors remove the need for individual income taxes, and in so doing reduce a government's incentive to respond to the needs of taxpayers.

Despite contradictory theories about the merits of individual income taxes in developing countries, the presence or lack of such tax structures and the share they make up of national GDP is another indicator for the existence of a resource curse when taken in tandem with diversification, democracy and transparency indices.([8]) Taxes, while generally considered unwelcome by most individual earners, do serve significant political purpose.

The idea that when an individual transfers a percentage of earned income to the state, he or she becomes a stakeholder in society is centuries old. When governments depend on taxes to operate, they require the consent of the governed, which holds them accountable for their economic and political actions. The loss of tax revenue, on the other had, breaks that link and rather than being a positive, beneficial force, it becomes a negative, as governments no longer have an incentive to care for the needs or desires of the people.

History is replete with examples. Before oil was discovered in abundance in Saudi Arabia, the ruling family depended on tax revenues from the merchant class of Jeddah. Today, Saudi Arabia has no income tax of any kind. Kuwait's pre-petroleum economy was based on pearls and related taxes maintained the ruling Al Sabagh family. Pearls traders were integrated into the Sheik's decision-making process through a merchant assembly. Following the discovery of oil in 1938, however, with tax dependence now outdated the Sheik disbanded the assembly, arrested those who opposed him. Within a few years, the pearl merchant class all but disappeared.([9])

In fact, so strong is the link between taxation and the reduction in government accountability, that acquiring reliable data on national taxation structures is very difficult and most resource rich exporters eschew publishing such data. One example, albeit extreme, demonstrates the case. Algeria reported in 2000 that individual income taxes summed up to one percent of its annual GDP, Saudi Arabia's as stated earlier was zero. This is compared to an average annual share in the EU-15 of just over seven and a half percent.([10]) According to 2003 OECD figures, individual taxes in Norway accounted for 11% of GDP, and 7.5% and 8.5% in France and Germany respectively.([11]) The differences are enormous and indicative of the why taxation is so important. In countries where individual taxation constitutes a relatively high share of GDP, there also tends to be greater economic diversity and higher levels political participation.

Simply stated, resource wealth reduces the need for taxation and thus the population and their rights whether property, political, or civil. Public welfare spending devolves from a matter of necessity based on accountability to an act of benevolence of whoever is in charge. In virtually every case, from Saudi Arabia to Venezuela, from Nigeria to Angola, even in Russia, heavy dependence on energy resource exports leads to a decrease in the GDP share of individual income taxes, reducing government accountability and participation. Combined with reduced economic diversification, citizens not only lose economic opportunity, they also lose political influence over their own leaders.

When developing its common external energy policy, the Union should work toward counteracting this phenomenon through programs aimed at strengthening the tax structure.

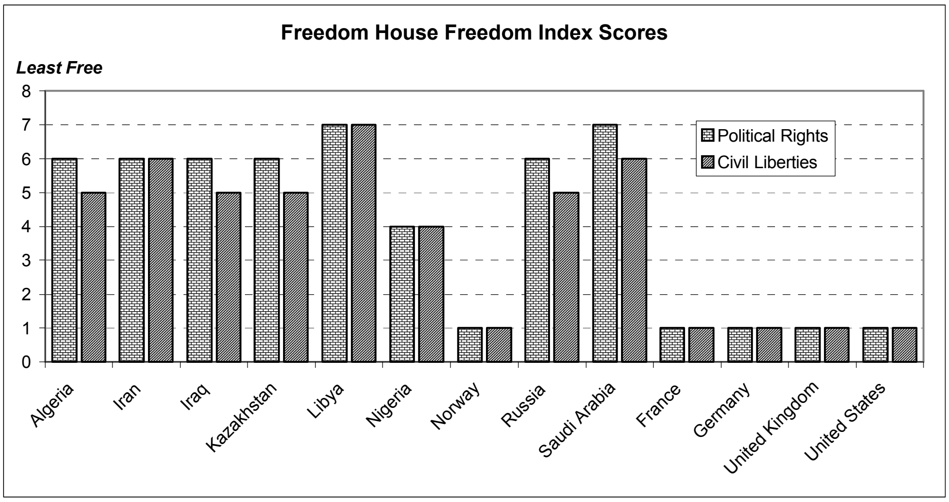
Politics, and Democracy

Resource dependence rapidly warps the economy of a country, breeding bad government, creating a massive imbalance of power, and fundamentally altering both the political nature and purpose of the economy. Resource revenues are easy to appropriate. Companies buy influence. And ultimately, domestic elites buy the state. In cases less severe, but no less indicative, politicians may eschew outright corruption, but nonetheless appropriate the moneys generated for their own political ends through state monopolization and thus power, a charge frequently levied against Venezuela' Hugo Chavez and Russia's Vladimir Putin.([12])

Indeed, evidence suggests that resource wealth tends to hamper democracy. Kuwait and Saudi Arabia illustrate the point. Once, the houses of Al Sabagh or Al Saud were dependent upon taxpayers that required them to be accountable to at least a segment of the population. Today, they rule by whim; what democratic institutions exist, do so only with their consent. Indeed, it is not uncommon among oil-rich countries to be ranked near the bottom on the World Bank's Voice and Accountability Index.([13])

Democracy, or more precisely political freedom, is therefore another indicator for evaluating the effect of a resource curse on Europe's primary energy suppliers. The US based, Freedom House, has been tracking and scoring political rights and civil liberties for the last thirty years. In its most recent rankings, Norway and Mexico were the only external energy suppliers to Europe to rank as free. All others were decidedly identified as either not or partly free. Using a ranking system of one to ten, where one represents a maximum degree of freedom and ten the least, the organization scored Russia with a six in terms in terms of political rights, as it did with Algeria, Iran, Iraq, and Kazakhstan. Only Saudi Arabia and Libya scored worse, while Nigeria came in a four. Similar scores were marked for civil liberties. (See Figure 3) For reference, France and Germany scored ones in both fields. Once again, another indicator demonstrates resource wealth does not bode well for democracy.

Figure 3: Democracy/Freedom Index, 2006



There are, of course, countries where resource wealth has not destroyed diversity, negatively tampered taxation, or dramatically reduced participation. Countries like Norway, Canada, United Kingdom, the Netherlands, and Denmark are, however, notable exceptions to an otherwise dark rule and all were advanced economies with established representative political systems before they struck oil. Perhaps countries with strong institutions, rule-of-law and strong tax systems are better suited to survive the curse.

If that is so, then the issue is not the resource that is the cause of the curse, but rather the political and economic system predating it. This argument is well presented by John Judis who suggests that newer resource rich states avoided the arduous process of extracting taxes from a reluctant population in the first place, and thus never had to negotiate the granting rights in return.([14])

But what about Russia? Is its lack of civil and political freedom really the result to its cornucopia of fuels? William Tompson, author of "A Frozen Venezuela" thinks not. He argues that Russia became lacked regulatory standards and a system of taxation when it emerged from Communism.([15]) Stiglitz argues similarly claiming Russia's rapid privatization program as the culprit.([16]) Perhaps Thompson and Stiglitz are right. Russia did emerge from Communism with an enormous bureaucracy, but the state was weak, and civil society institutions simply did not exist. However, it is difficult to pin Russia's economic and social woes to its fuel wealth. On the contrary, as in the case of Norway, Canada, and the UK, Russia retained the same structural qualities it had before becoming a primary exporter of oil and gas. It did not lose a taxation or regulatory regime. Like so many other energy rich countries, it simply never had one.

The aforementioned cases all share the common thread of structured and powerful institutions predating resource export dependence, and it is therefore possible to conclude that the curse is less likely to take hold in countries where such institutions exit. Where such regimes do not exist, however, oil may very well doom a country.

Transparency and Corruption

One of the fundamental consequences of resource wealth is the immense pressure placed on the political system by the exorbitant sums of money to be made, turning insecure political institutions into a virtual fisherman's market. The rich jockey for political positions and influence while businesses compete for lucrative contracts. Revenues earned are converted into bribes to manipulate those in power, who subsequently secure the positions of their benefactors, creating a vicious circle of corruption and patronage. Once in place, the system is hard break. Politicians, free from the burden of accountability brought on by taxes, afloat with funds beyond their dreams of avarice, secure their operations by limiting political participation and denying free press.

Without any press to criticize their behavior or any participatory rights for the population to hold them to account through fair and free elections, leaders stay in power for decades, or in some cases for life. Mobuto Sese Seko ruled Zaire for 32 years, from 1965 to 1997. The Aliyev family of Azerbaijan turned the former Soviet republic into a hereditary autocracy.

With their enormous wealth in hand leaders tends to chase after imprudent self-aggrandizing projects such as hillside resorts and unnecessary and expensive acquisitions such as presidential airplanes, palaces, and yachts.([17]) The ever-increasing cycle of kickbacks, bribery, and patronage further weaken already shaky institutions.
Leaders distributed wealth quickly and unevenly, leaving the vast majority poor and exposed. Literacy rates drop, if they were ever high. Education and health standards suffer.

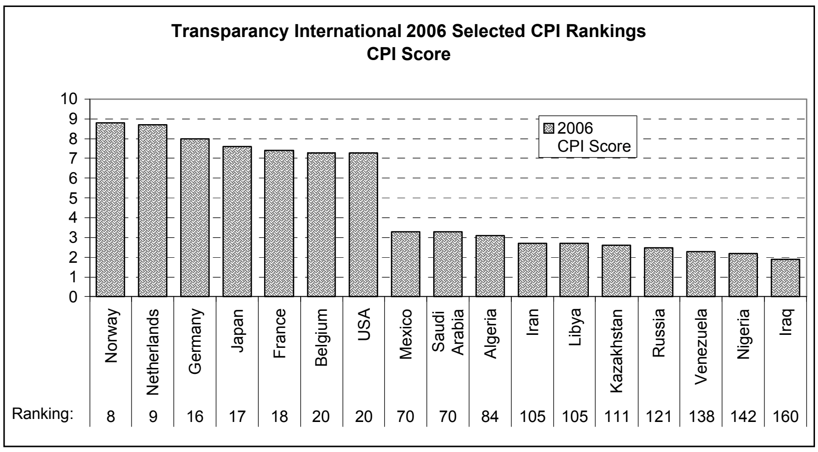
Ultimately, these fuels of insurrection, uprising, and civil war, naturally lead to domestic political unrest. Fearful of their positions, political leaders of resource rich nations beef up military and security spending. Democracy only suffers further. The truth is rich nations may be able to sustain democratic institutions, but rich nations that lack them, are not likely to get them.

As in the case of the Freedom House's Freedom Index, another well-established organization has been tracking and scoring corruption and transparency. Transparency International, based in Germany, annually scores and ranks corruption levels in countries worldwide. Known as the Corruption Perception Index (CPI), it is one of the most well researched and established indicators for corruption and is widely used by governments and NGOs. The figures it produces are revealing and substantiate the argument that there is an inverse relationship between resource wealth and good governance. (See
Figure 4)

Figure 4: Corruption Perception Index Scores from Transparency International (2006)

Country Rank	Country	2006 CPI Score
8	**Norway**	**8.8**
9	Netherlands	8.7
16	Germany	8
17	Japan	7.6
18	France	7.4
20	Belgium	7.3
20	USA	7.3
70	**Mexico**	**3.3**
70	**Saudi Arabia**	**3.3**
84	**Algeria**	**3.1**
105	**Iran**	**2.7**
105	**Libya**	**2.7**
111	**Kazakhstan**	**2.6**
121	**Russia**	**2.5**
138	**Venezuela**	**2.3**
142	**Nigeria**	**2.2**
160	**Iraq**	**1.9**

Average European CPI: 6.5



Looking at Europe's top ten external energy suppliers, all of them, with the notable exception of Norway, suffer under massive corruption. In fact, the mean CPI for the EU-27 (6.5) is more than twice that of nine out of ten of its suppliers. Eight of its suppliers are in the bottom half of all countries ranked and five are in the bottom third. Europe's largest energy supplier, Russia, ranks 121 out of a total 163 countries listed and scored just over a third (2.5) that of France (7.4). The evidence is once again clear. An energy-resource curse exists among Europe's external energy suppliers.

Inequality

Against the backdrop of an undiversified economy, a poor or non-existent taxation regime, low levels of civil and political freedom and corrupt government, it should come as no surprise that inequalities are rampant in most resource rich countries.

Nobel Prize winning economist and former chief economist of the World Bank, Joseph Stiglitz, called them "rich countries with poor people," a position unfortunately substantiated by hard facts.([18]) For example, seventy percent of Nigerians live on less than $1 a day, despite the fact that the country that has earned over $340 billion in oil revenues since the 1970s.([19]) Similarly, in Kazakhstan, a third of the population lives on less than $1 a day, while its autocratic president is the richest man in the country.([20]) In Angola, where some 90% of government revenues come from oil, two thirds of the population has no access to clean water and IMF audits reveal that $4.2 billion in oil revenues went missing between 1996 and 2001.([21]) And while the vast majority of the Equatorial Guineans live in abject poverty, the president, his family, and close friends bask in wealth and political debates are nonexistent.([22])

Undeniably, the vast majority of those living in resource dependent developing states (as opposed to non-oil-dependents) suffer. Nutrition, life expectancy, and school enrollments are low; literacy increases are slow and child mortality is high.([23]) With each passing day, every drop of oil or cubic inch of flowing gas, inequalities only increase. Social classes become stratified and minority rule becomes commonplace. In countries that ought to be the richest on earth, it is but the few who earn millions while the rest sink into poverty.

Gross political and economic inequality is the ultimate manifestations of the curse and once it has occurred, it is extremely difficult to reverse.

Section Conclusion

Europe's overwhelming dependence on foreign energy suppliers is in many ways a thorn in its proverbial paw. From a purely economic perspective, its dependence on external sources of fuel subject it to swings in prices and the related effects this has on both exporting and transit countries. On a political level, it ties Europe into relationships with stratified societies and autocrats. On an ethical level, it challenges the foundations of the Union's principles of perpetuating equality, mobility, and peace.

Many of Europe's external energy suppliers exhibit various symptoms of the resource curse. Clearly, some are more vulnerable than others are. Efforts to diversify its suppliers may reduce Europe's vulnerability to the short-term effects of curse related supply insecurity. However, it will not alleviate them altogether. To do this Europe must work to reduce the curse's effects among all its current and future suppliers. To do this it must develop policies and programs and measure their performance against the key indicators of economic diversity, democratic practices, taxation, corruption, and inequality.

Question 2: What activities and programs currently exist to limit the risk of the resource curse and do they work?

Given the well-documented evidence linking energy-specific resource wealth to a wide array of social, economic, and political problems, one would expect to find a range of programs designed to redress such exigencies.

Indeed, varieties of programs exist at different levels of control and varying degrees of governance and sound analysis requires us to look at the sheer scale of the industry, the actors involved, and the issues and strategies behind these programs.

To understand the problem in all its complexity it is necessary to understand the scale of activity and the players involved. At roughly four percent of global GDP, fuels accounted for eight percent of all exports worldwide in 2004, according to UNCTAD data. However, in terms of the European Union's top ten external suppliers of fuel resources, the average share of national exports was between fifty and ninety-eight percent! Moreover, in 2002, six suppliers, namely Algeria, Nigeria, Saudi Arabia, Iran, Norway, and the Russian Federation officially reported fuel exports proceeds in excess of 235 billion dollars (UNCTAD). In five of the six countries listed, mining and fuel exports were under the control of state-owned enterprises. In one, Russia, the government share of ownership was increasing in equity while decreasing in transparency. Indeed, one of the central problems found in the oil curse formula is the preponderance of state-owned enterprises, which operate free from the scrutiny of public ownership. Still, the lack of private ownership is only one element of the story and these astounding numbers are equally present among private sector actors. Of the Forbes 2005 top ten list of most profitable companies, six are in the petroleum industry and three, Royal Dutch/Shell Group, BP, and Total S.A. are European based and together reported 2005 profits in excess of sixty-two billion dollars, or approximately half of the entire 2007 budget of the European Union.

Additionally, understanding the activities and programs of governments, companies and NGOs endeavoring to counteract the negative effects of resource wealth, we must look at the motives behind the various actors involved. First, governments and elites of oil dependent countries have no incentive to forfeit any of the wealth or authority they possess. In fact, in resource rich countries, leaders and governments tend to stay in power for decades. Corruption and patronage increase with each passing year adding to an evitable cycle of dependence. This is certainly the case in Saudi Arabia and Algeria, and although more subtly so, increasingly appears to be the case in Russia. Second, private companies involved in the extraction, transport, and delivery of energy resources are natural rent-seekers. The extent to which they can profit usually depends on their support of political forces in the host country. Third, consumers, both individuals, but more particularly energy importers such as the European Union, have a stake in maintaining price stability and supply security. Fourth, the citizens of resource exporting states, who should be the winners in the process, are ultimately the biggest losers. Fifth, non-governmental organizations run the range in concerns from economic development to environment. Finally, intergovernmental organizations such as the IMF, EBRD, and World Bank concentrate on governance and accountability, with the primary focus of securing their loans and investments.

Altogether, there is a myriad of actors involved in any program to limit resource curse effects. Each has distinct and often opposing motives and goals.

So where does all the money go? Imagine the scenario of an increase in annual budget of the European Union of one hundred billion Euros. Such sums could offset structural development costs or at least reduce pressures on the social welfare system.
Yet, in many resource rich countries life expectancy is far below that of Europe. The average Nigerian citizen, for example, is expected to live forty-three years. That is thirty-seven years less than in France. Sadly, receipts from fuel exports are rarely well spent. Until recently, most nationally owned extractive industry income went unreported.
Therefore, reporting is one of several key issues in counteracting the ills of resource wealth. Indeed, without clear and transparent reporting, as well the mechanisms and the legal authority to monitor energy related proceeds, no program could function. Once reporting is public and audited, such that real balances of funds are known, money can be redirected into national investments, such as critical infrastructure, national health programs, small business advancement and welfare.
In order to manage such programs requires, in turn, another layer of public oversight. The degrees to which programs settle and integrate these issues determine the probability of success or failure.

In summary, the amounts derived from extractive industries, and energy in particular, provide national governments the opportunity to greatly enhance the per capita wealth, health and opportunity of its population. Unfortunately, the motives of the actors involved are often at odds with the public good, and hence, programs designed to convert ill effect into public benefit face an uphill battle. Therefore, any program, whether planned or ongoing, requires long-term commitment and legal authority in order to be successful.

Existing Programs

Three classes of programs designed either to mitigate the symptoms of a resource curse or directly promote economic diversification and/or civil society institutions have been established in the last twenty years, some of which have been remarkably successful while others are little more than cover for political expediency. These three are *rainy-day-funds* (also known as nonrenewable resource funds), *voluntary transparency and anti-corruption initiatives* and *dividend programs*. They are presented here as classes because their aims, while overlapping, are distinctly different in nature, as are the actors involved, the depth of their effect on domestic economic and political conditions, and the level at which they apply.

Rainy-day-funds

Nonrenewable resource funds exist in various forms under many names. Although their structures vary from case to case, they all serve two common purposes. First they should offset the negative effects of volatility in commodity prices on national budgets and second, they serve as a mechanism to put money away for future generations when their primary resource eventually runs out. Stabilization and savings funds are the two most common types. Since both are designed to save money for a rainy day, they are often referred to as *rainy-day-funds*.

Stabilization funds focus on alleviating pressures caused by shortfalls in income. In short, such funds are designed to stabilize annual budgets. Unfortunately, intention is rarely reality. When

revenues do decline, governments tap the fund or borrow against it to cover deficits, ultimately eating away at their own economic security, as has been the case in Iran and Venezuela.
Savings funds aim to create a large enough nest egg to cover a future decrease in income. Theoretically, they are inaccessible for a number of years. Norway and Kuwait are two good examples for this type of program. Nevertheless, facing a significant lack income, many governments borrow funds to offset the related loss equal to that deposited in the savings fund, rendering the entire process futile. As a rule, if politicians are intent on spending, no fund, no matter what its name or structure, is going to stand in their way.

The idea behind establishing a rainy-day-fund is sound in and of itself. In theory, by creating a stable reserve, it should lower volatility in public spending allowing long-term structural planning and programming, strengthening fiscal responsibility and minimizing currency fluctuations. The degree to which the fund is public, transparent, well documented, audited, and managed determines the workability of that theory.

Moreover, according to one World Bank study, "oil funds do not affect the pattern of government expenditure."([24]) Sampling twelve nonrenewable resource exporting countries, of which five had rainy-day-funds of some sort, the study drew three conclusions. First, fiscal spending in countries without a fund followed resource export earnings. Second, so did spending in countries with a fund. Third, in some countries the creation of a fund neither positively or negatively affected public spending patterns. Basing its skepticism on fiscal spending patterns, the study does not judge whether such programs are beneficial over the long term. In fact, it is too early to tell if any rainy day fund will survive until it really rains, let alone pours.

Most importantly, however, the finding that the existence of such funds is predominantly ineffectual in alleviating the negative effects of resource wealth points to a particular problem of focus for policy makers. In order to serve its purpose, funds must be managed appropriately and coupled with sound fiscal responsibility. It is precisely in this domain that policy makers in large consumer economies like the United States and the European Union can make a difference through legislative regulation.

The list of rainy-day-funds in operation from which policy makers can draw lessons and best practices is long. A collection of brief example cases, incorporating all the three classes of programs can be found in

Appendix I: Country cases of rainy-day-funds, transparency initiatives, and **dividends**.

All *rainy-day-fund* programs are essentially layaway savings or investment plans in one form or another. They are equivalent to an individual's tax-free retirement account. The central focus of all such plans is the long-term stabilization of finances at the national level and only in theory for the public good. Although such funds are setup by governments in resource-rich countries, there is no specific parameter for the type of government setting up such a fund. If the regime in question is not accountable to an electorate, it is hard to imagine that their fund would exhibit democratic qualities. It is equally difficult to determine whether under such conditions a fund would be used to benefit the domestic economic and political opportunities of a country's population. Moreover, as standalone programs, such funds, only apply to the management of a fraction of resource revenues and building and maintaining a fund does not necessarily require transparency, public auditing, or restrictive access.

Nor does the existence of such a program, as indicated by the World Bank study, necessarily affect fiscal spending patterns, social welfare, or civil society.

In order to account for the shortcomings of rainy-day-funds, an entirely different class of programs has been established, first by NGOs, and more recently by intergovernmental organizations and coalitions of consumers, most of who come from open, representative democracies. This class is known as *voluntary transparency and anti-corruption initiatives.*

Voluntary transparency and anti-corruption initiatives.

At the heart of the resource curse is the often-spectacular mismanagement of revenues that could be used for the public good. At first look, one might assume that the issue is simple: record all revenues and thus limit corruption. Further inspection, however, reveals the complexity of situation. Extractive industries in most countries external to the OECD are state-owned enterprises and for much of the last half century, these countries have been among the least democratic. The management of resource revenues is often in the hands of only few elites, a small minority of individuals who control the property of the state.
International corporations competing for access to resources are both subject to and complicit in maintaining the rules those elites establish. Many see open information as a risk to their competitive advantage. As a result, few have strong incentive to publish information about what they pay or earn in fees, licenses or export revenues. Indeed, to this day, a significant portion of Saudi Arabia's oil earnings is first distributed among some 10,000 royal family members before ever reaching the national budget in the form of monthly individual stipends between $800 and $270,000.([25])

The link between the resource curse and transparency is strong. Take for example four countries commonly associated with the oil curse. According to Transparency International's Corruption Index, Saudi Arabia ranks as 77, Algeria as 84, and Nigeria as 146. Russia placed in at 127. Indeed, in virtually every case, with notable exception of Norway, countries rich in energy resources demonstrate high levels of corruption and low levels of transparency. Conversely, Norway, the Netherlands, Denmark, and the United Kingdom, all net exporters of oil and established market democracies are considered highly transparent. Clearly, resource wealth does not inevitably lead to a lack of transparency. The question is, does a lack of transparency in a resource rich country necessarily lead to a curse. The consensus is yes.

Recognizing this link and connecting it to a wide range of issues including political stability, poverty, and uncontrolled mass migration, many governments and organizations have sought to find a mechanism to increase transparency and, thus mitigate what they consider the source of the of the problem.

Some programs focus solely on the publishing of revenues generated through either import or export. Others focus on the public accounting of rainy-day-funds, government, and commercial shares, taxes and rents. These programs are not focused on collecting money and investing it. Unlike the funds described before, these are information programs, designed essentially to name and shame those that breach voluntarily agreed upon standards.

Some programs are limited to state level membership while others integrate companies and civil society. Some focus on data standards, while others focus on data use. The key and limit of all of these programs is their voluntary nature. Among the many initiatives that exist, there are four that standout as particularly interesting for policy makers, the Joint Oil Transparency network or

JODI, the Revenue Watch Institute, the Publish What you Pay campaign, and the Extractive Industries Transparency Initiative.

The Joint Oil Data Initiative (JODI)

The Joint Oil Data Initiative (JODI) is an international reporting mechanism coordinated by the International Energy Forum Secretariat. The movement was founded in 2000 under the auspices of the seventh International Energy Forum in Riyadh by seven intergovernmental organizations (APEC, EUROSTAT, IEA, OLADE, OPEC, UNSD, and the IEFS). They agreed to establish what they called an "exercise" designed to promote transparency in the oil industry. That exercise evolved into an initiative in 2002 when the then fifty-five members decided to standardize and consolidate their reporting mechanism, placing the data into a common database, subsequently making the data public in 2005. The initiative currently claims ninety-two member countries and certainly plays a role in raising political awareness, data reliability, and timeliness of oil related data.
JODI's efforts have resulted in improved statistical systems in many oil-producing countries and the group regularly scores members on three categories of data, namely submission, timeliness, and completeness.

Functioning at the intergovernmental level, JODI is supported by the European Union's own Statistical Office, Eurostat. Unfortunately, because the initiative is solely a statistical standardization movement, it has little power to implement any changes in producer countries. Membership and performance remain voluntary. Nevertheless, Eurostat's high profile role as a founding member makes the European Union a primary player in JODI and creates opportunities for an increased EU role in standardizing data quality and reporting requirements in the oil sector.

Revenue Watch

In 2002, the George Soros' Open Society Institute initiated a program to monitor resource rich government revenues and expenditures. The program has since expanded enormously and in 2006, the program became a fully-fledged independent organization called the Revenue Watch Institute. The goal of RWI is to guarantee public access to information about public finances in resource rich countries, increasing transparent and accountable governance at the national level. It achieves this through the funding of national watchdog organizations, and the training of journalists, companies, government agencies, and intergovernmental organizations. With partners in more than twenty-five countries, the RWI is one of the most effective and well-funded programs and works together with the World Bank, Transparency International OXFAM and the RAND Corporation, just to name a few.

The Revenue Watch Institute operates primarily in three domains. It funds and produces research and publications, supports advocacy movements, and provides grants and capacity building funds. It has produced reports on Iraq, Kazakhstan, and Azerbaijan and co-produced a guide for related civil society activists titled Follow the Money together with the Central European University and the International Budget Project. It further co-produced a similar guide for journalists called Covering Oil: A Journalist's Guide to Energy and Development and is soon coming out with policy-maker's guide aptly titled Escaping the Oil Curse. Together these studies constitute the most extensive, applicable a readable guides for those interested in promoting transparency and accountability in energy resource industry.

Functioning at the national, regional, and international levels, the Revenue Watch Institute acts as a partner in the funding of national NGOs designed to keep track of national revenues and expenditures. In doing so RWI has become an excellent partner for policy makers in consumer countries to jointly fund and support programs engineered to reduce the resource curse.

Finally, RWI is works closely with two other organizations that are increasingly playing a central role in transforming resource cursed countries into one that are resource blessed, namely the Publish What You Pay (PWYP) coalition and the Extractive Industries Transparency Initiative (EITI).

Publish What You Pay

Founded in 2002, the Publish What You Pay coalition is a rapidly growing movement of over three hundred non-governmental organizations spread across fifty plus countries that advocate the public disclosure of royalties, bonuses, and taxes paid by companies involved in the oil, gas and mining industries. They promote the establishment of independent national monitoring bodies comprised of representatives from national parliaments, industry, civil society, and international financial institutions such as the IMF and World Bank. One successful example of their work is Chad-Cameroon Petroleum Oversight Committee, established by the Chadian parliament and required by the World Bank as prerequisite to funding of the Chad-Cameroon pipeline. The Chadian government repeatedly tried to circumvent the Committee, managing to use some of the revenues to buy a presidential airplane. However, its existence played a major role in the recording and reporting of progress and problems associated with the project and thus represents the value of such a setup in holding governments to account in their dealings with foreign aid, a matter that should be of particular value to policy makers. Moreover, similar activities in other supplier countries dramatically increase the accountability of private companies involved in the extraction, transport, and supply of energy resources, reducing investment risk, and enhancing corporate accountability and shareholder value.

Similar to the Revenue Watch Institute the Publish What you Pay coalition functions at the national, regional and international level. What distinguishes it from and compliments it to the Revenue Watch Institute is its nature as an advocacy movement and its wide membership of nongovernmental organizations and its focus on corporate spending and revenues.

Together, the Revenue Watch Institute and the Publish What You Pay coalition work closely with another, larger and ultimately more powerful movement, the Extractive Industries Transparency Initiative.

Extractive Industries Transparency Initiative

The Extractive Industries Transparency Initiative is in many regards the international policy culmination of the movement to require transparency and accountability in resource-rich developing countries. Unlike the RWI and PWP coalitions, EITI maintains its own trust fund and includes some governments in its membership, granting it significantly more power than a mere advocacy or education program. Founded in late 2002 by UK Prime Minister Tony Blair at the World Summit on Sustainable Development, the EITI is a movement that incorporates all the parties necessary to implement effective advocacy, accountability and good governance programs in both exporting and importing countries. It works closely with both the PWP and RWI. EITI constituents include countries, companies, industry associations, intergovernmental organizations, and private investors. In fact, key European industrial players such as France's Total, the United Kingdom's BP, and the Netherlands based Royal Dutch Shell are all key supporters, as is the EBRD, OECD and World Bank. So influential is the organization, membership in recent years has become a stamp of approval for aid granting institutions and policy makers.

The EITI is a platform for both designing as well as implementing programs to convert resource curses into blessings. Membership is divided between donors and implementers, the latter being the group allegedly suffering from a resource curse.

National membership (implementers) in the organization requires a formal declaration of government commitment to key principles, including recognition that resource revenues should benefit a country's citizens and a commitment to full and complete transparency. The real power of the EITI is its ability to revoke membership or label a country as non-cooperative, by judging along six key criteria paraphrased below: ([26])

1. Regular publication of all payments by companies to governments from oil, gas and mining revenues,
2. All payments must be subject to public audit,
3. All accounts are confirmed by an independent administrator,
4. The approach applies to state owned enterprises as well as public and private companies,
5. Civil society groups must be involved in the design, monitoring and evaluation of the process (a multi-stakeholder committee), and
6. Host governments are responsible and accountable for establishing a financially stable work plan with assistance from international financial institutions.

So far, no country has been expelled, but several have come under scrutiny for their performance, most notably among them Chad, which faced threats by the World Bank to cutoff aid if they breached the standards set by EITI. Meanwhile other countries, such as Nigeria, Ghana, and Azerbaijan have all made great strides in accordance with the initiative.

Still in its infancy, the EITI rapidly is becoming the umbrella organization for a worldwide movement to reverse the resource curse and it is an essential link in a global network of advocates. The World Bank fully endorses the EITI, and the EITI strongly endorses the activities of Publish What You Pay closing the circle from intergovernmental to nongovernmental and from national government to international corporations to local civil society movements. And private investors including, for example, UBS, Merrill Lynch, ING, and Deutsche Bank have all signed a public statement on investor transparency in the extractive industries, lending further credence to the movement.

The Extractive Industries Transparency Initiative is not, however, without valid critique. Some of those criticisms include: ([27])

1. The EITI is still voluntary and does not include Russia or any country from the Middle East.
2. The EITI is subject to rhetorical commitments, a point seconded by EITI supporter, the PWYP, which noted in their October 2006 report, Eye on EITI, that ten endorsing countries have failed to form necessary multi-stakeholder committees and eleven have yet to draft a plan.
3. When countries do identify the independent administrator, the individuals are often neither independent nor influential enough to effect change.
4. In many cases, civil society organizations are so weak or share membership in local political opposition movements, virtually eliminating their effectiveness on the committee.
5. It is too easily possible for national governments to authorize, even create, phantom civil society organizations in order to staff committees with their own representatives.
6. Data is often aggregated incorporating all companies or revenue types and is not yet standardized internationally making the data ineffectual in evaluating real revenue flows to and from companies and governments.
7. There is no standard legal form for national EITI programs and committees. In many cases, such as in Mauritania, the program was established by executive decree and not parliamentary legislation. In the event of a conflict of interest, all related institution can be deactivated with virtually no effort by a country's political elites.
8. There is no international law or treaty backing the EITI, and very few national foreign policies directly linking foreign aid to EITI compliance.

Without question, the Europe Union is one of the most significant players in the EITI and its member states constitute its primary supporters, including France, Germany, the Netherlands, and the United Kingdom. Consolidating their efforts and expanding their role to a coherent European wide program through legislative initiative would most certainly enhance the role and effectiveness of the initiative.

When combined with the establishment of rainy-day-funds, the advocacy roles of the Revenue Watch Institute and the Publish What You Pay coalition, the Extractive Industries Transparency Initiative offers an excellent means begin the transformation from a closed, corrupt and deleterious system of revenue siphoning into a virtually unlimited program of economic and political development. Well on their way, the initiatives listed so far are making progress. However, monitoring revenues, increasing transparency and accountability, and displacing funds for stabilization or later use still do not necessarily bring money into the hands of those who need it the most, namely the real stakeholder in a nation's resource wealth, its citizens. To achieve this, one requires a program that pays out shares of revenues earned to a country's population directly through dividend programs or indirectly through economic diversification.

Dividend programs

Dividend programs are the most equitable and direct form of distribution of resource wealth. In short, a resource dividend program is an annual payout of an equal share of revenues to every citizen of a country or state. At the end of every fiscal year, revenues are tallied and audited, subtracting management fees, transfers to balance the public budget and investments. The remaining amount is then divided equally among citizens. At face value, such a program could account for widest and most equitable possible wealth redistribution. Over time, it brings funds into the private sector, enhances individual and thus national wealth and should lead to greater individual wealth and independence of the population, and thus increased plurality in the society. However, no country has implemented such a plan to date. Only Alaska, one state in the union of the United States has implemented such a program and it has been a remarkable success.

Established by an Alaskan constitutional amendment in the 1970s, the program allocates at least twenty-five percent of all mineral lease rentals and royalties into a permanent fund. While the fund is invested in a diversified portfolio, the largest share of payout from the fund has gone directly to Alaskan citizens in the form of annual checks. In the last six years, each Alaskan citizen has received more than 9,000 USD in dividend payments, well over a thousand dollars on average per year. And that is just one state, with limited oil reserves nowhere near the capacity of countries like Russia, Nigeria, or Kazakhstan. If implemented in developing countries, it may well account for all the foreign aid currently provided by international financial institutions and top foreign aid donors combined.

Regrettably, resource dividends are difficult to manage. First, they require a strong system of transparency; an aspect that the programs listed above should be able to help with.

Second, dividend payouts require a functioning banking sector and a population in possession of and access to their accounts. Lacking either of these qualities, dividend programs cannot work. Nevertheless, in countries such as the Russian Federation, the United Kingdom, and Norway, where the banking infrastructure is strong and in at least two of the countries listed, so is transparency, no dividend program has yet been established. The reasoning behind this is not fully clear.
In the Alaskan case, the population demanded the dividend. In Norway, there have been calls for a dividend, but as of yet there is no major political movement to require it. In countries with little or no democratic institutions, such desires of the population would go ignored at worse and unnoticed at best.

The role of International Organizations

Many international organizations are involved in promoting transparency and good governance in extractive industries and have the capacity to offer the best channel for change. Global organizations such as the World Bank and the International Monetary Fund, as well as regional institutions such the European Bank for Reconstruction and Development and African Development Bank are all actively endorsing and pursuing some or all of initiatives listed above.

One of the most notable programs being promoted by an intergovernmental organization is the World Bank's Voluntary Disclosure Program (VDP). Claiming that "corruption is a disease that drains resources and discourages investments," World Bank president Paul Wolfowitz recently established the program, which grants all entities, be they public or private, the opportunity to come clean on all their past financial misconducts.([28]) Participants that do so receive a sort of amnesty for their previous transgressions and avoid debarment as a result of those activities. By allowing for a virtual clearing of the slate, the bank hopes to provide corrupt companies and governments with an opportunity to start afresh and keeps all the names of all participant confidential in order to protect the integrity of their newfound path. The amnesty however is only partial and the program does have teeth. Once a member, any transgression by a participant is automatically excluding from winning any contract or receiving any funding for a period of up to ten years. Also, the employment of any individual found or reported as corrupt in the past must be terminated by the country or company in question.

The International Monetary Fund took an important initiative in 2005 when the fund produced a manual on transparency aptly titled Guide on Resource Revenue Transparency. The guide specifically lays out a code of good practices on fiscal transparency, public availability of information, and assurances of integrity. Although the guidelines setout in the document are not prerequisites for IMF financing per se, they are the standard by which assessments are made, and thus carry significant weight.

Regional banks are increasingly lending their support to the Extractive Industries Transparency Initiative, including the African Development bank and the European Bank for Reconstruction and Development, the latter of which established already in 1999 a natural resources policy. That program specifically focused financing programs to restructure programs and finance projects dealing with the precious national endowments of Europe's periphery states, particularly those of the transition economies of the former Soviet Union. In 2005, the bank agreed to partially finance the construction of the South Caucasus Pipeline. It holds all parties involved to strict standards through quarterly monitoring and a non-voting seat on the board of its primary client, a Lukoil subsidiary.

To the extent that intergovernmental and financial institutions possess the unique quality of being necessary for the completion of large resource related investment projects, they provide a real qualitative control mechanism to limit corruption, increase transparency, and improve standardization. Increasingly, such institutions are becoming the mechanism by which states can qualify and monitor reforms. Where possible, such programs should be supported and enhanced.

Section conclusion

Current efforts to promote greater transparency and anti-corruption initiatives like the Publish What You Pay movement and the voluntary Extractive Industries Transparency Initiative although progressing have yet to make a significant dent in oil-related corruption or real economic diversification, stabilization and development. Nevertheless, the effort is both noble and necessary as it is simply impossible to manage what cannot be measured. Without transparency, no program, whether designed to stabilize, save or redistribute will ever work.

Moreover, programs that establish rainy-day funds while in existence in a number of places from Norway to Chad to Venezuela and Iran have all been raided at one time or another by their respective governments for purposes other than rainy-day needs. Indeed, Venezuela has changed the rules on how to spend its oil fund money several times in the last few years. Oil funds are supposed to take revenues from a depleting source and save it for future generations. Unfortunately, such a large amount of saved cash seems too enticing for countries to resist.

Therefore, when considering policy options for enhancing economic and social development, policy makers should be aware of the economic and political merits of resource dividend programs, and, in the opinion of this author, strongly consider implementing such programs by tying their establishment to foreign aid and trade relations.

Question 3: To what extent can economic diversification help to break the resource curse?

Economic diversity is an essential component to breaking the resource curse. In answering question two, we successfully demonstrated an inverse relationship between the level of diversity in terms of domestic economic activity and strong fluctuations in international commodity futures. Clearly, the more diversified the economy, the more insulated it is from this particular exogenous factor. Diversified economies, while affected by sharp increases and falls in fuel prices, are far more likely to ride out the proverbial storm with little or no structural damage. Moreover, diverse economies exhibit qualities that are easily discernable to the casual observer. Employment spreads across many sectors. Competition is high, which in turn inspires innovation, increases opportunity and investment, which ultimately leads to growing communities of small and medium size businesses, the bedrock of a functioning middle class.

How does one diversify an economy concentrated on energy resource exports? The answer seems simple enough. Reduce the significance of the sector by developing other sources of value added. Unfortunately, implementation such a reduction is extremely difficult and requires a great deal of effort and perseverance. In fact, although diversification is the obvious solution to the resource curse, correcting such imbalances has proven illusive to most countries that tried. This is due to many factors. Primary among them is inertia. Despite all the best wishes and proclamations of political leaders, rent-seeking forces are very strong in mineral and energy resource rich countries.
Moreover, diversification translates into redistributions of income and political power. Therefore, it is natural to expect leaders in such countries to oppose diversification either overtly or covertly.

As described in our response to question one and elaborated in question two, such countries are marked stratified societies where minorities do not just govern, they rule. Investors and companies seeking profits are bound to inevitably comply with whatever demands are placed upon them, only enhancing existing corrupt institutions. Leaders in most rentier states share common goals. They want to secure their foreign bank accounts, luxurious lifestyle and, of course, their hold on power. The politics at work in rentier states exists in the rawest of forms.

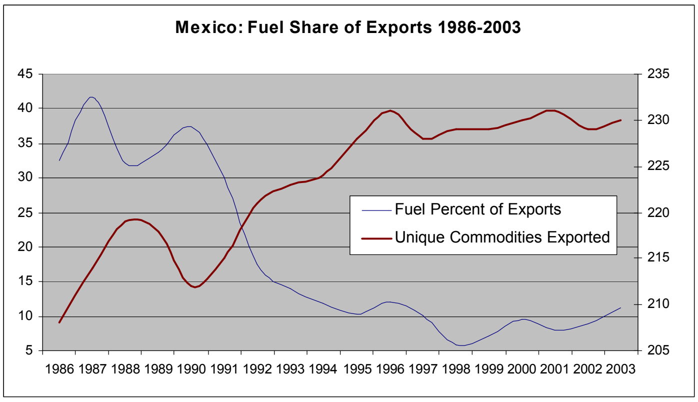
Indeed, implementing major reform is a difficult task in any political system. If we consider that negotiating co-decision rights for the European Parliament took decades and moving legislation through the US Congress is a regular exercise in bartering, then convincing autocratic regimes to liberalize their economies, allowing a new class of entrepreneurs to rise up and compete for power is exponentially more difficult. Countries like Saudi Arabia, Iran, and Venezuela have all made attempts to diversify their economies either by increasing the number of different goods they export or investing in downstream technologies. They all failed. The changes that do occur are superficial at best. Without significant, even holistic changes in the political and tax structures, in education and health care, economies already stuck in a staple trap, will find it very difficult to climb out. In fact, examples of well-managed diversification programs overseeing transitions from the resource cursed to the resource blessed are few and far between.

Nevertheless, there are countries that avoided or at least mitigated the negative affects the curse, such as Norway, the United Kingdom, Denmark, and the Netherlands, but they were all advanced, western, post-enlightenment societies, immunized from the curse long before they began exporting oil and gas.

One country that broke the curse is Mexico. In 1983, oil and minerals constituted some 63.7% of Mexico's exports. ([29]) Five years later, that figure dropped considerably. Mexico is today one of the most diversified economies in relation to the world average. While it is not rich, and its GDP per capita is far from high, the country boasts a growing manufacturing and service sectors. Indeed, taking the same two years, 1983 and 1988, the manufacturing share of exports rose dramatically. Within half a decade, Mexico decided and implanted a fundamental reduction in its dependence on oil exports, permanently altering its export structure by creating incentives, both foreign and domestic, to invest in electronics, automobiles, and the chemical industry.

When we look across the broader period from 1986 to 2003, using UNCTAD data we see that as oil's share of exports fell, the number of unique commodities exported rose. (See Figure 5) Meanwhile, Nigeria, a country that fell deeper into a staple curse over the same period, the commodities it exports cut in half.

Figure 5: Mexico's Fuel Share of Exports vs. Products Exported



Another unique point in the Mexican case was its use of financial instruments, particularly the invention of Petroleum Bonds, or Petrobonos. ([30]) Ground breaking in terms of risk management and hedging, Mexico introduced the three-year bonds in 1977, paying out quarterly at approximately ten percent and linking principal repayments to the price of its oil. Between 1970 and 1980, the country launched five successful issues. Mexico's Ministry of Finance even went so far as to hedge over a hundred million barrels of oil by selling futures. Using options and swap contracts it was able to secure its export prices in line with its 1991 budget, essentially securing the country's budget during the 1991 Gulf War.

So, what can we learn from the Mexican case? Unfortunately, very little; unique forces govern each particular country. One discernable factor was its geographic proximity to a large consumer economy. In that, it had a clear advantage. Another is that a sophisticated understanding of financial markets, i.e. sound financial and risk management are very important. But, there is little evidence to suggest that geography alone, or any other single element is important enough to achieve diversification. The truth is, diversification is not just a condition. It is a process and a painful one at that.

Indeed, examples of failed diversification policies far outnumber cases of success, a fact that allows us to better identify what not do to. For example, government selected and driven programs tend to be a bad idea. Governments are notorious for making bad business decisions, and tend to focus their efforts on state-run enterprises. They tend to invest in pet projects that only perpetuate some of the negative factors associated with the curse, such as corruption and patronage.

Although diversification must be driven by the private sector in order to succeed on a grand scale, there is a role for government, as demonstrated by several cases in Asia. Diversification requires infrastructure such as roads, ports, and telecommunications.
It needs institutional and human capital, access to export markets, and it needs to open its own markets to imports while relaxing constraints on its currency, allowing genuine competition to occur. Malaysia is a case in point. Between 1971 and 2000, Malaysia moved from being an exporter of raw materials to a manufacturer and exporter of electronics. Today the country boasts a per capita GDP of around $12,000 and just recently unpegged its currency from the US dollar. Oil constitutes less than a tenth of its exports and almost half the population now works in the service sector. According to Keith Myers of Chatham House, despite the fact that Angola has a similar endowment of oil reserves, it employs less than 11,000 people in its oil industry, while Malaysia employs 400,000 in consumer electronics.([31])

Another Asian example is Indonesia, which began diversifying its economy before the first oil crisis of 1973, successfully increasing its manufacturing base between 1970 and 1999 from 1.2% to 54% of GDP and reducing its oil share of exports by 30% over the same period, now at under one third.([32]) This is directly opposed to Algeria, which has seen its manufacturing base drop from 6.7% to 2.8% over the same period and Venezuela, of which oil constituted 80% of its exports in 1999.([33]) Three decades ago, Indonesia and Nigeria had comparable per capita incomes, both economies primarily based on oil. Today, Indonesia’s is four times that of Nigeria.([34]) That is the power of diversification.

An entirely different model for diversifying is that of the tiny emirate of Dubai. Dubai’s economy was once based entirely on oil. Today, its tourism sector outperforms oil and it is building the first metro system in the entire Middle East.([35]) The Wall Street Journal has nicknamed it “Arabia’s Wall Street.”([36])

What makes Dubai so special?

First is the factor of path dependence. Dubai was a trading post before it became an emirate. Its pre-oil experience of trade and foreign encounters gave it a “cosmopolitan attitude” according to Afshin Molavi, a Fellow at the New America Foundation, who compares it to Luxembourg and adds, “Dubai's most important success might be its ability to avoid the oil curse.”([37]) Already in the late 1950s, Dubai recognized the dangers of oil dependence, and setout on a diversification plan that would take decades to achieve, one project at a time. Unlike many other rentier states, Dubai did not start by building palaces and armies. Instead, it did something entirely boring, and eminently brilliant. It built a port. In part loaning money from Kuwait, Dubai dredged the muddy creek that divided it, allowing larger ships to pass, and creating a permanent port of call in the Persian Gulf. At the time, most thought the plan ludicrous, but sticking with it, it became the first of many extraordinarily successful investments.

Second, sound financial management. Dubai created free trade zones, liberalized its tax system, invested in manufacturing facilities, tourism, and a health care center, ultimately building some state-of-the-art media centers and hotels. Its Jebel Free Zone now hosts over two thousand international companies with annual revenues of over eight billion dollars. Dubai has grown

into something of corporate democracy, similar to Singapore. Its DP World was ranked as the world's seventh largest ports operator in 2005, controlling fifty-one ports worldwide, and Dubai Holdings ranks among the world's largest investors.([38])
In 2005, the half-city, half-company became the third largest shareholder in Daimler Chrysler after buying a one billion dollar stake. If that were not enough, the emirate built and now operates the first electronic exchange in the Middle East, the Dubai Gold and Commodities Exchange (DGCX), and plans are in the works to build a commodities trading platform to rival those in London and New York. Dubai's economy has tripled over the last ten years and keeps on growing. According to Molavi, one Dubai official recently joked, "Imagine what we would do if we had the Pyramids."

Dubai's successes are not limited to economics either. It is the only emirate to have a woman serving as its Minister of Economy and, unlike so many other oil-dependent states, Dubai spread its wealth among its citizens. As a result, democracy is seeping in; transparency is on the rise.([39]) Dubai is now classified as more transparent and less corrupt than Cyprus, Hungary, Italy and Poland not far Portugal, Spain and the United States according to Transparency International.([40])

Dubai is special; not because it escaped the resource curse, but rather because it defeated it altogether. And it did not happen overnight. It took planning and perseverance and as a result of its efforts, Dubai is shines bright and alone among so many examples of failure, having converted its oil wealth into sound financial investments, securing its status as a wealthy nation in perpetuity. While massive industrialized countries like Russia and the United States struggle to come to terms with their crumbling infrastructure, tiny Dubai, once a sand-swept settlement of 25,000, now commands the heights of global technology and economy.

The lessons of Dubai, Mexico, Malaysia, and Indonesia are all slightly different and yet obviously similar. Diversification, successful in each case took decades to implement, required stern political leadership, and sound financial management. In short, it takes time, patience, and wisdom. Unfortunately, these are not qualities often found among the leaders of rentier states.

In order to promote diversification schemes, policy makers should carefully consider including measures into any program design that that will: ([41])

1. Improve investment climates by opening and strengthening the banking system, including access to access to credit for small businesses
2. Restructure bureaucracies to reducing both financial and time transaction costs
3. Eliminate regulatory barriers to foreign ownership and participation in key sectors.
4. Support, yet carefully observe, industrial policies that promote diversification, by drawing lessons from the Asian and Dubai models
5. Be wary of rent-seekers. Establish laws to govern EU funding of projects based on fundamental principles of ownership
6. Focus funding on new economic activities, particularly aimed at small businesses, but avoid targeting specific sectors. Let the local market determine needs
7. Limit funding dimensions, never fully fund and make payouts in steps against proven realizable milestones
8. Integrate sunset clauses into all aid programs, guaranteeing termination of funding by either time, achievement, or lack thereof

9. Include in all aid packages a requirement to include oversight committees incorporating private sector, civil society organizations and political figures with enough stature to carry through the project
10. Select financing targets with the highest capacity for spillover
11. Support targets with a record of accomplishment.

Question 4: Can dividend-based programs serve as a mechanism for diversification, economic development, and user-friendly wealth redistribution?

A resource-based dividend program is one that takes a share of the proceeds of export revenues and distributes it evenly among the population every year. At face value, the idea is fantastic and may solve a great deal of economic and ethical problems surrounding the curse. Unfortunately, implementing such a plan is generally hypothetical, practically complicated, and possibly dangerous. It is hypothetical in the sense that with the single exception of the US state of Alaska, no political entity has ever successfully implemented it, or even tried. It is complicated for several reasons. First, in order for it to take place, it is necessary to collect proceeds into a central fund and then manage that fund securely and transparently, two factors generally lacking in rentier states. Assuming, however, that these obstacles can be overcome, the next problem arises, namely how to make the annual payments to a population.
In many countries the banking system is weak and in rural areas almost nonexistent. As a result, distributing annual checks may prove impossible without a first establishing a network of payout centres. Moreover, establishing such centres raise further issues of possible corruption and mismanagement. Finally, it is dangerous as far as direct infusion of cash into the economy may stimulate runaway inflation, yet another common problem associated with curse.

Nevertheless, the idea of a dividend remains attractive. If successfully implemented, it can raise the per capita standard of a population by upwards of a few percentage points per year. In poor countries suffering from great inequalities, it could serve as a healthy redistribution of wealth. When slowly implemented over decades and combined with a focused diversification program, it could foster small business and consumption, increasing the individual income tax base and hoist a country out of the throws of desperate poverty. It is a massive wealth redistribution program in its purest form, but unlike its revolutionary land-redistribution equivalent, it is deeply routed in the principles of market economics. A country's natural resources are its national treasure and the revenues generated from its export are a public good.

The fact that a public good is so mismanaged or worse misappropriated, explains why the curse is called a paradox of plenty. The revenues generated by oil and gas exports are enormous and frequently distributed unevenly. For example, some 95% of Nigeria's $54.2 billion exports in 2005 were from petroleum.([42]) With a population of approximately 137 million, that is roughly $395 for every man, woman and child in the country. However, most Nigerians live on less than a dollar a day. Nigeria is not unique.

In virtually every country affected by the resource curse, the vast majority live in poverty despite the enormous sums generated by a public good.

By incorporating dividend programs into development schemes and foreign aid, it may be possible to accelerate economic diversification. Indeed, the impact could be enormous. Table 1 below shows the oil and gas export revenues of eight countries from which the EU imports energy, and compares the per capita share of those exports, GNI, hypothetical dividend figures, and their impact on annual income.

Table 1: Oil & Gas Revenues and Hypothetical Dividend

	Oil/Gas Exports* *(thousands)*	Pop.** *(millions)*	Share/ Person	GNI per capita ***	HIDI rank***	**Dividend 30%**	**Dividend 10%**	Income increase from dividend at: 10%	30%
Algeria	24,129,175.95	33.5	720.27	2,270	103	**216.08**	**72.03**	3.2%	9.5%
Azerbaijan	2,217,889.84	8.5	260.93	930	101	**78.28**	**26.09**	2.8%	8.4%
Iran, Islamic Republic of	28,908,376.99	70.3	411.21	2,330	99	**123.36**	**41.12**	1.8%	5.3%
Kazakhstan	7,617,623.29	15.3	497.88	2,300	80	**149.37**	**49.79**	2.2%	6.5%
Libyan Arab Jamahiriya	11,949,524.00	5.9	2,025.34	4,560	58	**607.60**	**202.53**	4.4%	13.3%
Nigeria	23,571,893.22	134.5	175.26	430	158	**52.58**	**17.53**	4.1%	12.2%
Norway	41,333,715.76	4.7	8,794.41	51,810	1	**2,638.32**	**879.44**	1.7%	5.1%
Russian Federation	68,480,310.48	142.3	481.24	3,410	62	**144.37**	**48.12**	1.4%	4.2%

* UNCTAD, Handbook of Statistics, Structure of International Trade by Product (2003 figures)
** Population Reference Bureau (PRB), USAID, Washington mid-2006 figures
*** World Bank, World Development Indicators Database 2006, data from 2004
**** Human Development Indicator, UNDP, Human Development Report 2005

If only ten percent of oil and gas exports were paid out in the form of dividends in Nigeria, every individual would receive approximately seventeen dollars. Taking into account that most Nigerians live on lass than a dollar a day, that would be no less than a four percent increase in their annual income.
Not incorporating any other growth factors, that would double the average national income within two decades. In a single year, it would put $2.2 billion cash into the local economy, most which would be in the hands of those who need it the most. The numbers skyrocket if the dividend is calculated at thirty percent.

Unfortunately, the direct infusion of such large amounts of money into any economy will release inflationary pressures. Determining how much and for how long is difficult, and a matter for economists to debate and worthy of further study. The political and economic development significance of such a program cannot be overstated. It would change the dynamic of any country let alone one where few among the population have economic or political influence.

Establishing such a program cannot be done overnight. Similar to the problem of diversification, any dividend program must come in conjunction with massive institutional reform. The need for a banking system that hosts an individual account for every citizen is a gargantuan task in countries where such systems do not exist. Working transparency initiatives to control how funds are reported and audited are necessary to determine the dividend even before that. And governments must want to see such distribution take place, for without the political will, no dividend will ever be paid.

This latter point is of extreme importance because in many countries subject to the resource curse, separatist movements are engaged in enclave wars fighting for control of resources and it is unlikely that governments will be willing to share proceeds with their enemies.

As European policy makers formulate coherent approaches to its external energy suppliers, it should consider studying dividend programs. Where possible it should focus its policies and tie its aid to improvements in the banking sector and transparency initiatives. Then, once in place and verifiable, the Union can help implement such programs directly. In fact, it is the opinion of this author that the European Union is in a unique position to establish dividend programs in a number of countries. It could, for example, negotiate with supplier countries to withhold a share of the proceeds resulting from related imports in European banks in Euro denominated accounts, earning stable interest rates, later to be transferred into national distribution funds. It could also cooperate or even oversee the distribution of dividends at the regional or local levels. Although this may seem to be unacceptable intervention for many politicians both European and in supplier countries, the influence gained by the Union as a result would be enormous, as would the economic impact in target countries.

Question 5: Is there a link between corruption and security of energy supplies?

Recent disruptions in the Union's energy supplies substantiate a growing body of evidence that strongly suggests that countries plagued with high corruption also suffer under a general lack of economic freedom and political instability. A lack of economic freedom provides cover for corruption and political instability and all but guarantees eventual disruptions in supplies. The link between corruption and supply security, therefore, is not directly causal, but associative. However, when we compare Europe's primary suppliers of energy, they tend to score very poorly in terms of transparency, economic freedom, and political stability suggesting that the associative link is substantial.

Moreover, countries that exhibit these qualities both include Europe's suppliers as well as its transitory states. In the most recent case involving Russia and Belarus, oil supplies to the Union went silent for almost a week due to little more than price disputes. The Belarus case is particularly interesting as was the Ukraine gas crisis of December 2006 for similar reasons. Unlike many of the countries discussed so far, both Belarus and Ukraine are transit points, or better-labeled choke points, for Russian fuel supplies to the European Union. Egypt, which does not supply energy to Europe, controls a major waterway in the Suez Canal (most of the north bound shipments, roughly 800 thousand bbl/d of crude oil and 500 thousand bbl/d of petroleum products go to Europe) and any future conflict involving Iran would most certainly affect Persian Gulf supplies.([43])

The Ukraine oil crisis of 2006 and the Belarus gas crisis of 2007 revealed the Union's vulnerability to such disruptions, having forced industries in several EU member states to revert to petroleum, or tap precious reserves.([44]) What does this have to do with corruption? Unfortunately, a great deal. Corruption is not merely a single factor of cheating and graft. It is a culture of norms in which international contract standards and business ethics are scarce and subject to change on a moment's notice, and Europe's southern and future suppliers are not free from such forces.

In fact, Nigeria has suffered under violent disruptions to its oil production, Algeria is constantly under threat of civil conflict, and Egypt is a stone throw away from civil collapse.

As if the list of troubles facing Europe's external energy supplies was not dim enough, the low levels of transparency, high levels of corruption and related economic and political instability of Europe's suppliers are shocking. To comprehend the dimension of the problem it is valuable to compare Europe's supplier and energy transit states in terms of the associated factors listed above. (See Table X)

Table 2 displays ranks and score in three different categories from three different studies using 2006 data. Transparency figures come from Transparency International, political instability comes from the Failed State Index of the Fund for Peace and economic freedom and corruption scores come from the Economic Freedom Index, a combined study of the Heritage Foundation and Wall Street Journal. Together these figures reveal a startling picture and demonstrate a clear correlation between transparency, corruption, and political instability. Simply stated, the more transparent a country, the less corrupt and more stable it proves to be.

One of Europe's suppliers, Norway, scores among the top fifty most transparent countries. However, Egypt, Ukraine, and Belarus, key choke points for European energy supplies, rank 70, 99, and 151 respectively. Meanwhile, political instability, ranked from least to most stable, shows Norway coming in at 146, while Egypt, Syria, Belarus and Russia classify among the fifty most politically instable countries in the world. Indeed, the inverse correlation between transparency and instability is a striking –0.90 among the sixteen countries in the table and –0.89 among the complete dataset of 137 countries. Similarly, the Economic Freedom Index's corruption scores demonstrate that greater transparency correlates to less corruption, specifically 0.98 in the group displayed and a 0.99 among all countries surveyed. Finally, comparing the EFI corruption score to the FSI political instability score, one again sees a strong inverse correlation, proving that less corruption leads to greater political stability.

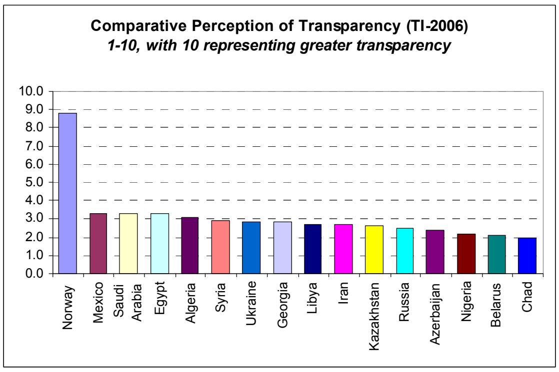
Table 2: Transparency, Corruption, and Political Instability 2006 ([45])

	Transparency International Corruption Perception Index (CPI)		Fund for Peace Failed State Index (FSI)			Heritage Foundation, Wall Street Journal Economic Freedom Index (EFI)		
Measure:	*Transparency*		*Political Instability, Delegitimization*			*Economic Freedom*		
	Ranking	Score	Rank	Score	Delegitimization	Rank	Score	Corruption
Norway	8	8.8	146	16.8	1.0	30	70.1	89
Mexico	70	3.3	85	73.1	5.9	49	65.8	35
Saudi Arabia	70	3.3	73	77.2	8.5	85	59.1	34
Egypt	70	3.3	31	89.5	9.0	127	53.2	34
Algeria	84	3.1	72	77.8	7.5	134	52.2	28
Syria	93	2.9	33	88.6	9.0	142	48.2	34
Ukraine	99	2.8	86	72.9	7.0	125	53.3	26
Georgia	99	2.8	60	82.2	7.7	35	68.7	23
Libya	105	2.7	95	68.5	7.5	155	34.5	25
Iran	105	2.7	53	84.0	8.1	150	43.1	29
Kazakhstan	111	2.6	88	71.9	7.5	75	60.4	26
Russia	121	2.5	43	87.1	8.2	120	54.0	24
Azerbaijan	130	2.4	61	81.9	8.1	107	55.4	22
Nigeria	142	2.2	22	94.4	9.0	131	52.6	19
Belarus	151	2.1	50	84.5	9.0	145	47.4	26
Chad	156	2.0	6	105.9	9.5	147	46.4	17

Correlations	InGroup	AllData	*(includes 137 countries)*
Transparancy to Political Instability:	-0.9027	-0.8871	
Transparency to Lower Corruption:	0.9849	0.9922	
Corruption to Political Instability:	-0.8862	-0.8871	

This data is represented by the graphs below.

Figure 6: Comparative Transparency Ratings, 2006 Figure 7: Comparative Corruption Score, 2006



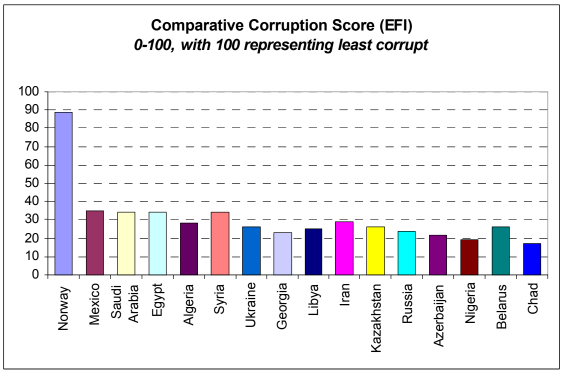


Figure 8: Political Instability, 2006

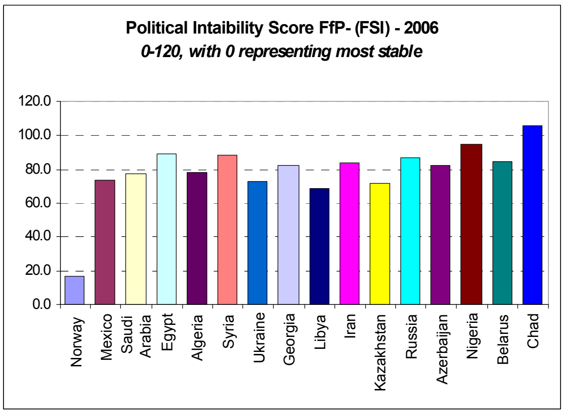
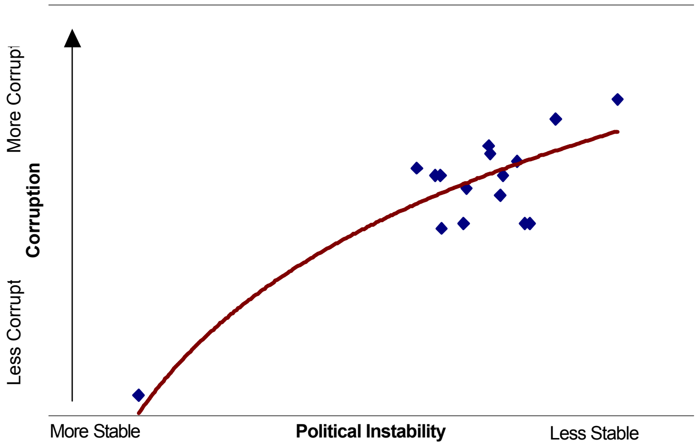


Figure 9: Correlation between Corruption and Political Instability 2006



Having established a direct connection between high levels of corruption and high degrees of political instability, it is valuable to understand how that translates into reduced security of Europe's energy supplies.

Countries vulnerable to political instability are subject to active and unpredictable surges of domestic violence, as well as sharp rises and severe economic decline. Inequalities lead to dissatisfied populations, increasing conditions of relative deprivation to the point of explosion ultimately giving rise to domestic unrest.
This can lead to a quick and nasty downward cycle of capital flight while inevitable slumps in commodity prices only further decrease already imbalanced trade revenues. Shadow economies form and smuggling becomes commonplace.
Corruption becomes endemic, decreasing transparency further. In extreme cases, governments lose legitimacy and violence breaks out, putting a halt to all exports, fuels included. Governments, desperate for funds, may even cease paying for public services and salaries, and in exchange focus on military institutions that secure their positions. Indeed, countries classified as politically instable tend to be highly militarized with extremely powerful and pervasive internal security services. Such is certainly the case in Iran and Belarus, and many consider it a growing concern in Russia. In other cases, as in Nigeria, governments simply outsource internal security to mercenary armies.

The role of political stability in terms of supply security is enormous. Major oil disruptions caused by war, nationalization or political unrest across twenty-two out of forty-eight months preceding January 2007 resulted in global supply reductions of more than 1.2 million barrels a day, or a total reduction of more than three quarters of a billion barrels of oil.([46]) Moreover, the political stability of Europe's key external energy suppliers outside of Norway can all be classified as either politically unstable or unreliable. Algeria, the world's second-largest exporter of natural gas, is struggling against militants, as is Russia, Iraq, Iran, and Nigeria. Saudi Arabia is under constant threat of terrorist attack. In Russia, energy is quickly becoming a tool to extract political gains and in Venezuela, France's Total and Italy's ENI face significant threats of loosing their investments through nationalization. Across the board, rentier states supplying Europe with energy increasingly exhibit instability.

A brief look at the events of 2006 demonstrate the fragile nature of these regimes and the their oil supplies.

In January, Russia cut natural gas supplies to Ukraine over a price dispute. Chad repealed a law requiring it to set aside a percentage of revenues in a rainy-day-fund because the president needed an airplane and weapons. In Nigeria, sabotage halted deliveries of some 100 thousand bbl/d and Iran removed IAEA seals from the Natanz uranium enrichment facility, raising the specter of future UN sanctions and further shortfalls in supplies. In February, with a cold winter hitting Europe, poor planning and poor management reduced Russian deliveries of natural gas, forcing Italy to dip into its strategic reserves. Meanwhile, militants tried and almost succeeded in destroying the Abqiq oil processing terminal in Saudi Arabia, sending NYMEX oil futures up 4% in a single day and in April, Venezuela seized control of two oil fields operated by Total and ENI after they refused to be stiff armed into new joint venture agreements.

A month later, extreme violence in Nigeria reduced oil output by 75% and by summer, militants in Iraq had attacked the country's northern pipeline, terminating all oil transit from Kirkuk. About the same time, a dubious leak in one of two spurs in Russia's Druzhba oil pipeline, the main link to Europe, cut off Lithuania in what is widely seen as political pressure to secure a Russian stake in Baltic oil projects. In September, sabotage in Iran damaged a pipeline feeding natural gas to Turkey and finally, in December, after criminal gangs punctured a hole in a Nigerian fuel pipeline, crowds of the country's poor scrambled to siphon off as much free gasoline as they could carry in a scene of utter chaos.([47])

Taken as a whole picture, these events bear out the thesis that that politically instable governments make commercially unreliable suppliers. They also substantiate the correlations presented above linking corruption as an associative factor, perhaps an indicator, perhaps even an indirect causal agent to political instability. As the maxim states, where there is smoke, there is usually fire.

Question 6: What more can be done, in particular by the EU?

Curing the resource curse is of paramount importance to long-term stability of the European integration process. Poor levels of economic diversity, transparency, corruption, and political instability among Europe's current and projected external energy suppliers clearly threatens supply security, and may one day even force Europe into resource related conflicts, thus demonstrating the need to establish coherent and successful external policies and do so as rapidly as possible.
This is particularly challenging to the Union for both endogenous reasons of the institutional framework of Europe, and exogenous ones concerning changes in the nature of the international political system. EU foreign policy is still an intergovernmental, consensus driven process, subject to the vagaries of Europe's heterogeneous domestic politics, exemplified by the varying energy needs, supply sources, and path dependent relationships with those suppliers existent among Union members.

Moreover, the history of EU institutional development, power sharing, and more recently a common foreign policy indicate that the time frames required for the Union to reach consensus and implement common policies are not likely to keep pace with otherwise rapid political and economic developments occurring within and among its external suppliers. Prolonged efforts to establish a common foreign and security policy are indicative of this point. Both of these factors are bound to the legal construction of the Union, and are obstacles that must be recognized when designing and external policy and program. Alongside these internal obstacles stands Europe's multilateral approach to global politics, a matter of principle faith in most corridors of European power. Despite its obvious merits, however, multilateralism restricts the quantity of policy tools available in a global environment that is looking less multilateral with each passing day.([48]) Indeed, shifts in the global balance of power, perhaps best demonstrated by the 2003 US led invasion of Iraq, but accentuated by the rising influence of China in Africa, of Russia on international oil and gas markets, and both in the UN Security Council, should pose serious concerns for Europe.

Together, these factors constitute serious barriers to a concerted and coherent European effort to stem the negative effects of, or outright cure to, countries suffering from a resource curse. Nevertheless, Europe has successfully implemented several programs in the past that at least in part can be taken as models for future efforts. Among these have been regional developments programs covering the former Soviet Union (TACIS), accession countries in Eastern Europe (PHARE), and the Mediterranean area (MEDA). All three programs provide a solid body on experience on which to build future programs.

While the focus of each program leaned toward slightly different sectors, perusing their history reveals that the Union does have the technical expertise and financial means to restructure political and economic systems and strengthen public administrations and institutions, when there is strong motive on the part of participating states, which saw and ultimately achieved membership as their primary goal. Programs in the former USSR, which focused on improving the private sector, particularly rural economies, the quantity and quality of small and medium sized enterprises (SME), specific sectors such as transport and telecommunications have met with some, but still less success. This is logical as most of the successful elements of the program were of a technical assistance nature and therefore much less generalized in scope. As indicated from the results presented so far, any program designed to reduce or cure a resource curse should focus on democratization, citizenship, and civil society, especially the latter including free press, political participation, and transparency initiatives.([49])

Europe's approach to the Mediterranean region is another historic program area from which to draw lessons. From 1995 to 2003, Europe committed in excess of €5 billion in aid and projects in ultimate pursuit of establishing a free trade area by 2010. Similar to the PHARE program, one would expect a high level of motivation by participating states. However, it is difficult to determine progress at this time. Ongoing conflicts in the region and intransigence by national regimes to make political and administrative reforms, not to mention privatization of state-owned industries, makes achievement of this target seemingly unlikely.

So, what can Europe do to help alleviate the resource curse that it is not already doing? First, it must take stock of the policy instruments available to it. Second, it must reassess trends in the global balance of power and its role in it. And finally, it must decide the extent to which it is willing or able to utilize the available instruments in that context.

European policy instruments are currently soft in nature. Much of its efforts have focused on multilateral approaches to reform through various intergovernmental organizations. Three primary instruments have stood out. Active or conditional use of aid is the first. Promoting open access to its markets is the second. And offering of membership is the third. The first has only limited applicability in countries suffering under a curse. The second is useful for enticing reforms in countries that have a variety of commodities to trade, but much weaker when their sole export is an energy resource desperately needed by the Union. The third is in most cases inapplicable either as a factor of geographic distance or political feasibility. A fourth instrument exists as well, namely the European Neighborhood Policy, a promising new venture to deal with bordering states without offering them full membership. However, participants in the program are certain to eventually raise the issue of full membership, begging logical questions as to how deep must integration be and how and for how long must it last.

As one can see Europe's traditional leadership, or "follow me" approach is less enticing to the leadership of countries basking in wealth of excess.

Indeed, as long as access to European energy markets is secured to them by virtue of Europe's energy consumption needs, few of the traditional policy instruments currently available in Europe's arsenal will succeed in promoting fundamental political change. That does not mean, however, that the Europe is unable to affect change.

There are several key areas of activities and tools available to Europe. Keeping in line with its multilateral approach the international relations, the Union should focus on establishing international standards for the reporting and auditing of energy exports and imports. At present, Europe has declared its support for the EITI and the European Parliament has voiced support for the PWYP coalition. However, European law does not require suppliers to submit to either. Europe could mandate such procedures through legislation, moving the issue squarely into its first pillar. Indeed, through increased legislative activism, Europe may be able to achieve far more than at the intergovernmental level.

Expanding European law to incorporate principles of trade based on specific social, economic, and political indicators in partner countries would not only allow the Union to increase cooperation internally, but also lay the legal groundwork for establishing a coherent negotiating position externally. This in turn would allow for the integration of standardized accounting practices, membership in transparency initiatives, and the enforcement of political reforms as a prerequisite, rather than an accompaniment to its foreign aid programs.

To many in the Union, the idea of legislative activism would certainly seem counter to its institutional nature. However, by introducing counter-curse related laws into European domestic and trade practices, political leaders would at least partially free themselves from domestic pressures on the energy import issue. Moreover, Europe is well on the path of establishing a common external energy policy. Making it law, sends a clear message to suppliers that access to European markets is no longer open to autocrats.
Clearly, such a policy shift cannot occur over night. The cases of those countries that successfully emerged from the curse demonstrate that it is a long-term process, decades in the making.

There is danger in this approach. Even if it can be successfully carried through against all the forces arrayed against it within the Union, there is the question of its applicability in external relations. Supplier Saudi Arabia is not about to make major domestic reforms. Nor for that matter is Iran or transit point Egypt. And while countries such as Nigeria and Russia are making some steady progress, albeit in different areas, there is little evidence to suggest that they cannot find different markets for their fuels if Europe's demands become untenable. Striking a balance between desired outcomes, practicable applicability, and consumer needs will prove to be very delicate. Indeed, failed use of such conditionality could prove to be a serious problem. Moreover, political change in autocratic and stratified societies must come slowly. Afghanistan and Iraq both demonstrate the dangers of a sudden shift from autocracy to democracy. Open elections in Palestine brought the radical Islamist group, Hamas, to power, forcing Europe to curtail aid, and sending poor Palestinians deeper into economic plight. Therefore, if carried out, stricter European requirements on political reform should take into account the high risk of political change.

Whether such a legal approach is implemented or not, Europe needs to quickly do as much as possible to shore up its ability to pose reasonable degrees of conditionality upon its external energy suppliers. Programs are already under way to increase stocks and diversify sources. These programs need to expand significantly to account for extended periods of months, rather than weeks, of reserves. Otherwise, it will eventually find itself unable to yield any concessions and hence strengthen, rather than weaken the forces behind the curse.

Another popular approach increasing Europe's political bargaining position vis-à-vis its external energy suppliers is to gain independence by reducing internal energy consumption levels, specifically to reduce CO_2 emissions by upwards of 30%, turning to sustainable, renewable, or new forms of energy. If successful, it would certainly increase Europe's ability to incorporate conditionality into its external relations with rentier states, essentially providing the Union the power to dictate terms. Unfortunately, there are large gaps in this logic. There is scant evidence of any country simultaneously reducing energy consumption while increasing or even maintaining economic growth.

Moreover, while reducing CO2 emissions is a noble venture, there is equally little evidence suggesting that reductions in CO2 will reduce demand for external energy sources as consumption is disproportionately tied to transportation, and therefore must assume that driving decreases, or at the minimum stabilizes at current figures. This too is difficult to fathom.

Finally, there is the issue of the changing nature international of international relations. In a recent paper titled "Energy supply security and geopolitics: A European perspective" published in the journal Energy Policy, Aad Correljé and Coby van der Linde, propose an enlightening, if not worrisome view of the future of geopolitics. They describe two future storylines. In the first, liberal economics and effective multilateral institutions govern a continuously integrated world economy, much along the lines of the post-WWII era. It is a world geared toward multilateral approaches to global problems. They call this *Markets and Institutions*. In the second, the world divides into economic, political, and even religious blocks that compete for resources via political, economic, and military power.

They call this future *Regions and Empires*. In this world, bilateral agreements, shifting alliances, and unilateral actions govern international affairs. In the former, organizations such as the United Nations and WTO are both important and effective. In the latter, they are considerably less so. ([50])

It is no understatement to claim that European Union is intricately interwoven into the multilateral approach adopted in the second half of the twentieth century. A major shift in the international political order, degrees of order far beyond current rifts in the international system, would pose serious consequences for the European project. It would also open (or reopen) the path to new instruments otherwise outside the normal domain of European politics in the last few decades. A Europe in open international competition for resources, particularly energy, would be forced to establish bilateral trade agreements with key suppliers, more effectively protect its companies, and give up some if not most of its precious principles.

Correljé and van der Linde suggest that the movement towards a world governed by *Regions and Empires* is already underway. Barring any major reversal of the events of recent years, this author agrees that analysis; and this does not bode well for curing the resource curse.

If such a world does increasingly come into play, however, Europe is uniquely positioned to respond. Capitalizing on its geographic proximity to fuel reserves, Europe could quickly establish specialized trade arrangements and fixed price purchases of natural gas and oil. By working diligently to integrate internal and Russian energy markets, Europe may be able to forestall, and even offset, many of the negative consequences of such a shift. If, on the other hand, the world does not slip back in to the multi-polar insecurity of centuries past, Europe, having integrated its energy markets with those of its suppliers, will have gone a long way to strengthening not the security of its energy supplies, but those of the entire international system.

Finally, irrespective of any future realignments in geopolitical order, European efforts to assists curse affected countries must continue at an accelerated pace, for it is specifically the autocrats in power in such countries who will benefit first from a regionally divided planet, not only continuing the curse, but exacerbating it exponentially.

Question 7: What additional external threats are posed by rentierism and instability in producer countries?

Having shown that rentierism gives rise to a skewing of social, economic, and political forces, it should come as little wonder that such states continuously fall victim to instability and conflict, which may in turn interrupt energy supplies. The problem, however, only begins there. When the process of state failure moves into high gear, which it inevitably does, a series of crises unfold, not least among them humanitarian, threatening their neighbors, regions, and trading partners. Europe is not immune from these forces and the threats posed by the instability common among its energy-producing partners can have both an internal as well as external effect. The following is a very brief description of some of those threats.

Five particular threats stand out as particularly relevant. First, failed states usually suffer from significant internal human displacement, and ultimately an exodus of refugees, which in the case of North Africa and the Middle East, means possible significant inflows of refugees, overwhelming Europe's social cohesion and already strained social system.

Second, instability in these states inevitably endangers European nationals present, placing the onus on member states to evacuate them, placing European civil and military forces in direct conditions of conflict. Third, path dependent associations linking individual European states to specific suppliers, increases the likelihood of future civil-military interventions and as progress is made forming a European rapid deployment force, the likelihood that other European nationals will be involved in any resulting hostilities also increases. Fourth, the supplier-consumer relationship that Europe maintains with its suppliers gives rise to accusations that it is support, even fostering, autocrats over the better interests of the supplier country's population. This in turn gives justification to politically violent movements to target European interests at home and abroad.
Finally, each of these issues affects every EU member state differently creating internal political tensions within the Union, reducing its capacity to coherently prevent or respond to crises.

Failed states will create increased migration pressures on Europe

In its March 27, 2004 issue, the Economist magazine wrote, "Europe is a rich, stable continent […] surrounded by poor, unstable countries with lots of young people."([51]) Indeed, much of Europe's current migration problem is rooted in the enormous economic disparity between Union members and their southern neighbors. At present, most migrants merely seek to escape the desperate poverty and lack of opportunity at home to come to what they believe is a promised land of opportunity. As conditions worsen in their countries, one can only expect those numbers to increase. If those states collapse altogether one cannot ignore the probability of a mass exodus of refugees headed right for Europe. The possibility of a sudden infusion of large numbers of refugees poses serious risks to the social cohesion and economic stability of Europe, particularly along its southern border and within in its cities.

The presence of European nationals in producer states will increases the likelihood of intervention

Rentier states are bound to collapse at one point or another. In the most peaceful of scenarios, a quick coup d'état replaces one autocrat with another, usually a military junta of some sort that quickly restores a semblance of stability and security. In most cases, however, this does not happen. On the contrary, violence breaks out and quickly reaches the streets, endangering the lives of combatants and noncombatants alike. When such situations arise and Europeans are in danger, there is little question that, at the very least, member states will intervene to evacuate their citizens. Indeed, such evacuations are not uncommon in recent European history.

In 2000, the Union even drew up secret plans to evacuate some 20,000 Europeans Union passport holders from Zimbabwe using armored convoys and escape routes through neighboring Mozambique and South Africa.([52]) Although never carried out, it would have the most serious large-scale evacuation in modern history. That same year British troops did evacuated its citizens from Sierra Leone and late in 2004, several hundred European citizens escaping mob violence were airlifted from the roofs of their homes in Côte d'Ivoire by French Army helicopters and evacuated using French and Spanish military airplanes. Most recently, thousands of European Union citizens where evacuated from Lebanon using military and civilian forces from across the Union, in what Michael Evans, Defense Editor of the British daily The Times, called an operation "to rival Dunkirk."([53])

The continued presence of Europeans in virtually every troubled country around the globe, all but guarantees future military operations aimed at rescuing them.

Path dependent associations all but guarantee European involvement in internal conflicts

Europe's colonial past all but guarantees future civil and military interventions in response humanitarian crises in its former holdings. Such has been the case with interventions in the Congo, Central African Republic, and Côte d'Ivoire, Sierra Leone, and Morocco, not to mention Afghanistan and Iraq. The ties between Europe's member states and their former colonial holdings are very deep, comprising bonds of language, culture, and identity. As Europe's integration process advances to include a merging military and security forces, those links can further be expected to first associate and then incorporate the forces of other member states. In fact, combined European security forces now operate in civil/semi-military and police operations in at least seven countries, several of which were former colonies of one or another Union member states.([54])

If the geopolitical order continues to deteriorate and/or if the United States retreats to certain splendid isolation, at least in military terms, Europe increasingly will be called upon to intervene in humanitarian crisis resulting from failed rentier states, whether based on oil, gas or jewels in the Middle East, North and West Africa. Moreover, the combined factors of the presence of European nationals in key, unstable, energy producers, significantly increases the likelihood that Europe will become the target rebellious forces.

Europe's supplier-consumer relationships will make it target for forces opposing autocrats

Europe's supplier-consumer relationship will gives rise to accusations that it supports, even fosters, autocrats. Such accusations would not be new. In order to keep oil and gas flowing, western countries, Europe and the United States in particular do in fact support authoritarian governments with aid programs and weapons sales, the latter used predominantly to militarize and perpetuate autocratic rule, in what one author called a "see no evil position."([55]) Add to these national interests, those of the international finance community, which sees investments in extractive industries as one of their most lucrative portfolios, and one has recipe future crises.([56]) In the eyes of an increasingly desperate opposition movement, the maintenance of trade with corrupt leaders combined with the presence of wealthy European companies and individuals directly involved in the extraction and shipment of oil and gas is synonymous with guilty association. In fact, resource wealth has been used by Sudan, Algeria, Nigeria, Yemen, and Indonesia in Aceh to specifically prolong bloody and repressive conflicts.([57]) This phenomenon is particularly acute in rentier states according to Oxford's Paul Collier who found that there was a 25% chance of enclave wars in oil-dependent states as opposed to 1% in those lacking oil.([58])

Furthermore, Europe cannot expect associated animosities deriving from its commercial, diplomatic, and military presence abroad to limit itself to the country in question. France, Spain, and the United Kingdom have all come under attack at home as a result of their interventions. Indeed, European properties and at home and abroad were endangered by the mere publication of cartoons in Danish daily.

With European multinationals present virtually every rentier state around the world future political violence aimed at the European homeland is a certainty.

All these factors could create tensions between Union member states

European integration is subject to many forces, chief among them the demands of its member states to retain as much sovereignty over their own affairs as possible. When conflicts erupt abroad and Union members engage in conflicts outside a common position, it clearly strains relations, which in turn significantly detracts from the efficient workings of the Union itself. Nowhere was this clearer than in the 2003 US led invasion of Iraq. Not only did Europe divide on the sole issue of intervention, accusations and insults between those in support and those against severely soured internal negotiations, slowing the reform process raising anew debates about the future of European security.

It is unlikely that any future conflicts will unfold differently, even if Europe were to eventually establish its independent expeditionary military force. Moreover, Europe's northern and eastern members have already proven that they are less concerned about issues of southern border security than Spain, France, and Italy. Tensions within the union are normal, and most are based on endogenous economic and social factors. However, external conflicts, particularly those connected to Europe's colonial past are certain to raise tensions with other members that have little or no connection to the countries troubled spots.

With time, a common Europe identity will most certainly coalesce, and when it does, the presence of a European of one national origin will no longer be distinguished for any other. All will be European, and any threat to a single European considered a threat to all. For the immediate future, however, that is not the case. Therefore, any and all of the threats arising from instability in rentier states will effect some Europeans more than others, and in so doing create serious and unpredictable tensions within the Union.

Conclusion, Consolidation, and Analysis

This study focused on whether being rich in energy resources is a blessing or a curse. To the extent that this can be determined, it further setout to determine the scope of the problem and its relevance to European external relations. Designed for policy makers, the paper was constructed as responses to seven distinct, yet interrelated, questions and definitively demonstrates that an energy resource curse plagues many EU supplier states. This in turn directly affects Europe's energy supply security and threatens to engulf Europe in unwanted hostilities at home and abroad. It also finds that there are examples of excellence in recovering from and even converting the curse to a blessing.

The seven questions investigate the evidence suggesting that a curse exists among Europe's external energy suppliers, active programs to limit that risk, the significance of economic diversification, the applicability of dividend programs, the link between corruption and security of energy supplies, additional possible actions of the Union, and further threats posed by resource cursed countries.

The resource curse manifests itself in a multitude of ways and this study demonstrates the existence of an inverse relationship between resource wealth and a wide array of social, economic, and political fortunes. Among these are low levels of democracy, a lack of economic diversity, high levels of corruption, low levels of transparency, dramatic swings in economic activity, and extreme political violence.
The study found that countries affected by the curse, lack substantial tax systems, divorcing governments from their populations, reducing accountability, and a wide array of rights, whether property, political, or civil. The study also found a strong link between the resource curse, poor transparency, and inequality, and proved that a low level of economic diversification is a reliable indicator for the existence of the curse. More diversified economies are simply more resilient and stable.

Economic stabilization and transparency are the goals of most programs aimed at curing the resource curse and four international programs stood out, the Joint Oil Transparency network or JODI, the Revenue Watch Institute, the Publish What you Pay campaign, and the Extractive Industries Transparency Initiative. Unfortunately, they are voluntary, reducing the incentive to join for corrupt autocratic regimes. Many international organizations, financial institutions and the Union all support these initiatives. However, none tie aid or trade to membership within in them or compliance to their standards. Stabilization programs take the form of nonrenewable resource funds, or rainy-day-funds. Dividend programs, which distribute share of national resource revenues evenly among the population, were found to be both highly attractive as an instrument of development yet largely hypothetical in their applicability. Difficult to manage, such programs requires depend on high degrees of transparency and a functioning banking sector, qualities found to be lacking in virtually every rentier state.

Moreover, the study clearly demonstrates that economic diversification is an essential component to breaking the resource curse and that countries with more diversified economies export a greater variety of commodities and are less susceptible to swings in energy commodity futures. It also found that in three cases, Mexico, Malaysia, and the emirate of Dubai, diversification took decades to implement, required stern political leadership, and sound financial management. There are no quick fixes.

Another important conclusion of the study is proof that the link between corruption and supply security, while not directly causal, is both associative and substantial. Europe's primary external suppliers of energy score very poorly in terms of three key indicators, namely transparency, economic freedom, and political stability.

Using 2006 data from three different studies including Transparency International's Corruption Perception Index, the Fund for Peace's Failed State Index, and Economic Freedom Index, a combined work of the Heritage Foundation and Wall Street Journal, we found definitive correlations between low levels of transparency, high levels corruption, and increased political instability. The startling picture they represent clearly proves the less transparent a country, the more corrupt it is, and the less stable it proves to be. We found that greater transparency correlates to less corruption with an almost perfect correlation of 0.99 among all countries surveyed.

And in terms of corruption's link to political instability, we found a strong inverse correlation between corruption and political stability, proving that less corruption leads to greater political stability. Political instability frequently translates into supply disruptions, and therefore, we conclude that politically instable governments make commercially unreliable suppliers.

In looking at the policy instruments available to the Union, the study determined that the Union does have the technical expertise and financial means to restructure political and economic systems and strengthen public administrations and institutions and found that Europe's successful implementation of similar past programs could be taken, at least in part, as models for future efforts. However, implementing such programs successfully in resource cursed states could challenge the Union due to the nature of Europe's institutional framework, and a rapidly changing international balance power. Therefore, before embarking on any anti-curse program, Europe must take stock of the policy instruments available to it, reassess trends in the global balance of power and its role in it, and decide the extent to which it is willing or able to utilize its available instruments in that context.

The study recommends the controversial approach of conditionality in the use of aid and finds that the Union should legislate standards for the reporting and auditing of energy exports and imports at home and abroad. Although the Commission has declared its support for the Extractive Industries Transparency Initiative and the European Parliament has voiced support for the Publish What You Pay coalition, the Acquis does not require external suppliers to subject their accounts to public audit or publish what information about contracts, commissions, and rents. Therefore, the study finds that Europe should mandate such procedures through legislation, moving the issue squarely into its first pillar arguing that through increased legislative activism, Europe may be able to achieve far more than at the intergovernmental level, and increase its political bargaining position vis-à-vis its external energy suppliers. The study describes both the merits and dangers of this approach, particularly the question of its applicability external relations both today an in the context of future in geopolitical realignments. Meanwhile the study questions the somewhat approach of increasing Europe's bargaining position by gaining energy independence through the reduction of internal energy consumption levels, considering the evidence for such predictions to be speculative and without precedent.

Finally, the study looks at the question of additional threats posed by instability in rentier states and identifies five interconnected areas of concern. First, political instability eventually leads to failed states, which along the way suffer from significant internal human displacement and ultimately an exodus of refugees. In the case of North Africa and the Middle East, this means significant inflows of refugees into the Union, overwhelming its social cohesion and already strained social system. Second, local instability inevitably endangers European nationals in the country, forcing member states to evacuate them, exposing European civil and military forces to conflict situations. Third, history links European states to specific suppliers, and increase the likelihood of future European civil-military interventions.

Fourth, Europe's consumer relationship with suppliers gives rise to accusations that it supports and nurtures autocrats giving justification to politically violent movements to target European interests at home and abroad. Finally, each issue affects every EU member state differently, generating internal political tensions within the Union, reducing its capacity to coherently prevent or respond to both international and internal crises.

So is being rich in energy resources is a blessing or a curse? In most cases, it is certainly a curse and one that is not purely local in scope. Across the globe, countries suffering from the curse pose serious internal and external threats, many of which can be mitigated and even reversed with a concerted multilateral effort. In Europe's case, in particular, the curse existing among many of its external suppliers poses serious challenges. Luckily for Europe, its two largest suppliers are considerably more stable than the remainder. Still, Russia is not nearly as stable as Norway and vital transit countries Ukraine and Belarus suffer from serious deficiencies in virtually every significant indicator of supply stability.

Finally, Europe is in a unique position to lead institutional and legal reforms in the area of transparency. It should earnestly follow that route. Europe's close proximity to and heavy dependence on external energy supplies ties its fate to the political stability and fortunes of its suppliers. Recognizing this essential fact, Europe must redouble its efforts to promote local institutional and administrative reforms as well as diversify their economies. Action is of paramount importance.

Policy Recommendations

When developing its common external energy policy Europe, should recognize that unless the resource curse is reduced or reversed in energy-supplier countries, Europe will continue to face sudden and possibly dramatic shortfalls in its energy supplies. Therefore, we strongly recommend that the Union:

1. Lead international efforts to remedy the resource curse
2. Lead international efforts to establishing rigorous standards for the reporting and auditing of energy exports and imports
3. Legislate standards for the reporting and auditing of energy exports and imports at home and abroad, mandating such procedures and moving the issue squarely into its first pillar.
4. Require intergovernmental and international financial institutions to link aid and membership to reductions in corruption, increases in transparency
5. Employ curse related conditionality in the granting of aid and access to European energy markets, awarding energy suppliers with greater access to markets in exchange for domestic reforms
6. Negotiate with supplier countries to withhold a share of the proceeds resulting from related imports in European banks in Euro denominated accounts, earning stable interest rates, later to be transferred into national distribution or rainy-day-funds funds. The Union also could cooperate or even oversee the eventual distribution of those funds as part of a wider dividend program at regional or local levels.
7. Take stock of the policy instruments available to it. Then establish consensus driven

policy guidelines as to which instruments the Union is willing to use and then apply them quickly to establish precedent.

8. Reassess trends in the global balance of power and Europe's role in it
9. Implement an umbrella program designed to remedy the curse through local institutional and administrative reforms and domestic economic and export diversification through activities including:
    a. Closely monitoring the level of economic diversification among its energy suppliers and specifically
    b. Develop an array of aid and technical assistance programs to expand domestic economic diversity among its energy suppliers by
        1. Opening and strengthening banking systems, including access to access to credit for small businesses
        2. Supporting, yet carefully observing, industrial policies that promote diversification, by drawing lessons from the Asian and Dubai models
        3. Focusing funding on new economic activities, particularly aimed at small businesses,
        4. Limiting funding dimensions, making payouts against proven milestones
        5. Selecting financing targets with the highest capacity for spillover
    c. Develop an array of aid and technical assistance programs to reduce corruption, increase transparency, accountability, and political stability by
        1. Including in all aid packages a requirement to include oversight committees incorporating private sector, civil society organizations and political figures with enough stature to carry through the project
        2. Limiting the duration of any aid program
        3. Actively supporting citizenship and civil society organizations domestically, as well as the free press, NGOs such as Publish What You Pay
        4. Cooperating with IGOs and NGOs in support of political participation and transparency initiatives
        5. Strengthening the tax structure

The Union should also

10. Identify key indicators for scoring and ranking economic diversity, transparency, corruption, and political stability. Publish those figures and them for official assessments.
11.

The controversial nature of recommendations 3, and 6, require further, albeit, brief explanation.

Recommendation 3: Legislate standards for the reporting and auditing of energy exports and imports at home and abroad, mandating such procedures and moving the issue squarely into its first pillar.

European law currently does not require suppliers to submit to the public record the complete set of commissions, rents, and license fees they issue domestically, as this is widely seen as an internal matter. However, this study has shown that the internal affairs of energy suppliers often has negative affects on the security of Europe's energy supplies as well as in member states. By mandating such procedures and moving the issue squarely into its first pillar, Europe will achieve far more than at the intergovernmental level. Expanding European law to incorporate principles of trade based on specific social, economic, and political indicators in partner countries would not only comply with European principles it would smooth internal cooperation and lay the groundwork for establishing both coherent negotiating positions externally and influencing adoption of such measures into international law.

Clearly, such a proposition is controversial. Many in the Union oppose the idea of such legislative activism and see it as a further threat member sovereignty. However, by introducing such counter-curse legislation into the Acquis, political leaders would at least partially free themselves from domestic pressures on the energy import issue, having shifted the matter to Brussels. Moreover, Europe is well on the path of establishing a common external energy policy. Making it law, sends a clear message to suppliers that access to European markets is no longer automatically open to autocrats.

Implementing such a curse remedy law will take time and thus legislation should include reasonable timetables similar to those found in environmental treaties allowing both the European Union and its external supplier countries to make all the necessary reforms.

Indeed, implementation must take time. The cases of those countries that successfully emerged from the curse demonstrate that it is a long-term process, decades in the making. Moreover, if pressed to quickly, the policy itself could become very dangerous for Europe's supplies. Supplier countries are in shortage of buyers and could easily turn away from Europe if pressed too hard, too fast. Supplier Saudi Arabia, for example, is not about to make major domestic reforms. Nor for that matter is Iran. Striking the right balance between desired outcomes, practicable applicability, and consumer needs will prove to be a very delicate mater. Nevertheless, the merits far outweigh the risks, and with careful judicious application can have an enormous impact on the long-term stability of Europe's energy and physical security, enhancing regional and world peace.

Recommendation 6: Negotiate with supplier countries to withhold a share of the proceeds resulting from related imports in European banks in Euro denominated accounts, earning stable interest rates, later to be transferred into national distribution or rainy-day-funds funds. The Union also could cooperate or even oversee the eventual distribution of those funds as part of a wider dividend program at regional or local levels.

As European policy makers formulate coherent approaches to its external energy suppliers, it should consider offering to host rainy-day-funds on their behalf. There are many of reasons for this. Such funds constitute long term savings plans for countries. By storing funds in European banks under the auspices of Union management, negative issues of graft, corruption, and transparency can be drastically, while simultaneously existing as both a strategic reserve for the source country and as an additional instrument of influence for the Union.
Indeed, the Unions skills in financial management could be employed to even redistribute those funds to individual citizens through NGOs or any one of a number of channels established under the guise of a development program as listed in the recommendations above.

Rainy-day-funds are the most secure way to guarantee the longevity of the strategic wealth of what are usually very poor countries. Dividend programs are the most equitable and direct form of distribution of resource wealth, both a national treasure and a public good. Simply stated a resource dividend programs is an annual payout of an equal share of revenues to every citizen of a country or state. Over time, it brings funds into the private sector, enhances individual and thus national wealth and should lead to greater individual wealth and independence of the population, and thus increased plurality in the society. If implemented in developing countries, it could easily account for all the foreign aid currently provided by international financial institutions, the top foreign aid donors combined. Moreover, by incorporating dividend programs into development schemes and foreign aid, it may be possible to accelerate economic diversification.

Europe should carefully study dividend programs and consider how to integrate them into its foreign aid and external policy regimes. It could even match those funds as part of a cooperative aid program to improve the banking sector, and key economic diversification issues. In fact, it is the opinion of this author that the European Union is in a unique position to establish such dividend programs in a number of countries.

Although such a policy may seem to be unacceptable intervention for many politicians both European and in supplier countries, both the economic impact in target countries and influence gained by the Union as a result would be enormous.

Unfortunately, resource dividends are difficult to manage. They require a strong system of transparency and a functioning banking sector with a population in possession of and access to their accounts. Lacking either of these qualities, dividend programs cannot work. Furthermore, the direct infusion of such large amounts of money into any economy will release inflationary pressures. Determining how much and for how long is difficult, and a matter for economists to debate and worthy of further study. Both of these negative points can be seen as entry points for an energy resource focused Union external policy.

Appendix I: Country cases of rainy-day-funds, transparency initiatives, and dividends

Many countries today either have or are establishing funds or programs to increase transparency. Some have been in existence a long time, such as Kuwait's Reserve Fund for Future Generations (RFFG) established over thirty years ago while others like Algeria’s Stabilization fund are only a few years old. Unfortunately, limits to the length of this study, the applicability of lessons learned, and the availability of qualified and verifiable information (as a result of transparency issues) limit the number cases that can be presented here. Although, a further and far more extensive study comparing the myriad of cases available would certainly prove useful in formulating policy approaches, certain well-documented cases can serve as good guideposts for policy makers. The following section presents six brief country cases where rainy-day-funds or transparency initiatives are underway.

Country: Norway	
Program Name:	Government Pension Fund – Global
Current estimated value:	$240 billion
EITI Membership Level:	Supporter
Pros:	Highly transparent, participatory and accountable
Cons:	The vast sum of the fund raises political concerns among many Norwegians who demand a greater share of the cake and lower taxes. Several studies demonstrate that Norway’s oil wealth has led to a decline in political trust.
Resource curse:	Mild
Key National Institution:	Parliament

General Applicability:	Difficult. Good management conditions of the fund are path dependent on Norway's democratic system.
Abstract: The most successful rainy day fund is Norway's "Government Pension Fund – Global" originally established in 1990 as the State Petroleum Fund (SPF). Managed by Norway's Ministry of Finance and operated by the country's Central Bank, the fund is worth over $200 billion. The GPFG collects 100% of state petroleum revenues. Together with the return on its investments, the fund covers all non-related oil budget deficits, meaning it is an essential component of the national budget with all associated political participation and accountability. Guidelines for the fund's investments are subject to Parliamentary review, although not necessarily consent, and auditing is conducted by the country's Auditor General. Ethics play a special role in GPFG as a result of political debates that occurred in the country in recent years, resulting in the establishment of an ethical committee that oversees all investment choices. The GFPG is one of the most transparent funds in existence and is a supporter of EITI.	

Country: Russia	
Program Name:	Russian Stabilization Fund
Current estimated value:	$83 billion (according to RIA Novosti)
EITI Membership Level:	NONE
Pros:	All records are published, the fund has only been used to stabilize national budgets, and it is projected to grow to $255 billion by 2009.
Cons:	Very little transparency, design of the fund artificially limits its size to roughly 3.8% of GDP with no apparent plans for what to do in the event of excess.
Resource curse:	Mild, but unpredictable
Key National Institution:	Parliament, but controlled by the executive branch
General Applicability:	Not recommended. Although the size of the fund is growing the lack of accountability and clear planning combined with its vulnerability to political forces at play domestically will determine whether the fund is maintained, invested, or looted.
Abstract: Approved by parliament in late 2003, the fund came into existence in 2004 and coupled with the state's increased role in the oil sector has grown rapidly. However, significant speculation about the future of the fund, particularly where and when it will be spent, lends doubts to its stability in the long-term. Theoretically, the fund should have reduced Russia's national budgetary dependence on resource rents. This too, however, remains to be seen. Initially, the fund was supposed to be invested in foreign debt securities, but has found its way into foreign exchange placed in Federal Treasury accounts with the Bank of Russia with forty-five percent in US dollars, forty-five percent in euros, and ten percent in British pounds. Various schools of thought in Russia are currently vying for future management of the fund. One camp is pushing for investments in infrastructure such as direct pipelines to Europe and Russia's western coast, while another is demanding that the fund be used to secure private loans	

for various development projects. And another group opposes spending any of the fund's resources in pursuit of stabilizing the environment for foreign investment. As of late 2006, it is difficult to tell what will happen to the fund, or for that matter who will run it once, or if, Vladimir Putin leaves office.

Country: Iran	
Program Name:	Islamic Republic's Oil Stabilization Fund (OSF)
Current estimated value:	Unknown, circa $10 billion
EITI Membership Level:	NONE
Pros:	Setup through legislation, the Majlis (parliament) should have authority over its expenditures.
Cons:	Virtually no accountability, low transparency with the OSF not presented in Iran's national budget, no balance sheet has ever been presented to parliament, and is run as an account of the Central Bank by selected senior government officials.
Resource curse:	Very Strong
Key National Institution:	In theory parliament. In fact, the President and the Supreme Council.
General Applicability:	Not recommended. The fund is regular raided and is entirely under the control of political forces, used primarily for subsidizing gasoline.
Abstract: Setup originally in 2000, the Islamic Republic's Oil Stabilization Fund (OSF) was designed to be the perfect rainy-day-fund, putting away reserves and investing in foreign assets as a mechanism to overcome the approaching depletion of Iran's oil reserves, its primary resource and economic income. Unfortunately, according to various reports as much as eighty percent of the fund's resources have already been spent. While some of the expenditures have allegedly gone to noble causes including disaster relief and disabled war-veterans, other expenses have served more dubious purpose, including bonuses to government employees, weapons for and expansion of the Basij, Iran's formidable and feared volunteer militias. On the other hand, the fund is regularly used for propping up exports, and subsidizing domestic gasoline prices and other essential commodities, keeping a poor population from slipping into abject poverty. However, the practice has noticeably encouraged wasteful fuel consumption and in 2004, the parliament agreed to withdraw $825 million from fund (OSF) just to pay for rapidly increasing gasoline imports. Without question, OSF expenditures have little to do with planners' original intent. The fund also has been used for credits in the industrial and mining sectors, further exacerbating the country's poor economic diversification. The future of the fund is questionable under current circumstances. Its lack of transparency and particularly its use for domestic political gain by elites relegates the Iran's oil revenues to a political slush fund.	

Country: Nigeria	
Program Name:	Nigeria Extractive Industries Transparency Initiative
Current estimated value:	No Specific Fund, excess revenues are deposited in federal accounts, other revenues are divided between states and the federal government.
EITI Membership Level:	Implementer
Pros:	Transparency is increasing as Nigeria is making strong efforts to meet EITI recommendations and criteria. Increases in transparency have led to increased government spending on anti-poverty programs.
Cons:	All funds received by the federal government are integrated into the national budget. No specific fund or dividend program has been established and thus no specific revenue trace exists from resource income to public expenditure. States also receive a share of oil revenues, but are generally held to lower standards than the federal government.
Resource curse:	Extreme
Key National Institution:	NEITI
General Applicability:	Partially recommended, needs establishment of a fund or dividend.

Abstract:

Nigeria is in many ways a rising star in the field of transparency. Increasingly the country is implementing anti-corruption programs, publishing its records, and cooperating with the international community. Despite its increase in transparency, however, no direct program has been established to distribute its vast oil wealth, and the country remains subject to oil related political violence and abject poverty. In fact, the former is so significant, that it has twice threatened Nigeria's ability to maintain supply security. According to the World Bank, some eighty percent of Nigeria's oil and gas revenues accrue to about one percent of the population. Although corruption is a serious issue for the international community in dealing with Nigeria, the poverty in country is spectacular when compared to its resource wealth, demonstrating the overall limited effectiveness of any transparency initiative. Even if the country successfully frees itself from the corruption that has so skewed its economy in the last half century, without serious investment into diversification and a massive redistribution of wealth, the country will continue to be plagued by violence and instability. Nevertheless, the NEITI is very good first step in laying the necessary ground work for eventually establishing some sort of fund or even payout dividend program.

Country: United States, State: Alaska	
Program Name:	Alaska Permanent Fund Dividend Program
Current estimated value:	$32 billion
EITI Membership Level:	NONE
Pros:	Highly transparent, long-running, publicly managed fund, designed to support the state's budget when oil eventually runs out.
Cons:	Dividends are not guaranteed
Resource curse:	Significant in terms of economic diversification, low in all other cases
Key National Institution:	Alaska Permanent Fund Corporation (APFC), a state-owned company.
General Applicability:	Limited applicability, an excellent example for countries or states with high degrees of political participation and accountability.
Abstract: The Alaska Permanent Fund Dividend Program is by virtue of its uniqueness something akin to a *sui generis*. Although the system has proven to be an excellent mechanism to transfer wealth and provide accountable ownership to Alaska's residents, its applicability is entirely dependent on the specific nature of Alaska, its small population, large size, relative wealth, and most particularly its path dependence. When the Trans-Alaska pipeline was being built, voters demanded that their representatives establish a mechanism to secure their future incomes. With enough support the population demanded and passed an amendment to the state's constitution requiring at least twenty-five percent of all state oil revenues to be placed in independent fund, the principal of which could never be touched for fiscal purpose. Since its establishment, the fund's value has grown on average ten percent per year, while its principal has steadily increased. Legislatively controlled, the fund is vulnerable to political mood swings. Obviously, the dividend is popular. Therefore, any attempt to limit it could ruin a politician, even if it will eventually be necessary when oil revenues dry up. Some are even proposing to dip into the fund's principal. Overall, however, Alaska's dividend program effectively delivers oil money directly into the hands of its stakeholders, and represents one of the best mechanisms yet designed to secure the interests and rights of energy resource stakeholders.	

Country: Venezuela	
Program Name:	Venezuela's Macroeconomic Stabilization Fund (MSF)

Current estimated value:	Unknown, <$700 Million in 2003
EITI Membership Level:	NONE
Pros:	Legislated program, public reporting through 2003
Cons:	Criticized for high corruption, is also a store for the state-owned enterprise's oil profits and hence accessible by the company, has seen several legal changes to its structure and rules in the since being created.
Resource curse:	Extreme
Key National Institution:	Banco Central de Venezuela
General Applicability:	Not recommended. The fund is little more than a political slush fund as was its pre-Chavez predecessor, the Venezuelan Investment Fund.
Abstract: Venezuela tried the concept of an oil revenue based fund already in the early seventies. It failed then, and the current Macroeconomic Stabilization Fund is failing now. Since its establishment in 1998, the fund has been subject to rule constant changes. In 2003, the country's state-owned oil company withdrew half of the entire fund to cover strike related costs. Although the corruptive nature of Venezuela's resource management is a historical one, the degree of mismanagement and political uses of the fund have only increased since Hugo Chavez became president. Since coming to power, Chavez has systematically removed checks and balances on the fund's accounts through decrees. Given the increasingly politicized nature of his petrodollars, it is unlikely that the fund will survive intact if there is any long-term reduction in oil prices. The Central Bank of Venezuela, the manager of the fund, reported in 2003 a dramatic reduction of the funds value. Moreover, transparency is decreasing. The source of Venezuela's current and rather extensive foreign aid programs to neighboring countries is difficult to determine. However, since much of the country's income is based on oil revenues, now entirely in state hands, one can safely conclude that the fund is either not receiving its legislated share of revenues or is being spent at spectacular rates to the detriment of the population	

Appendix II: Measuring Economic Diversification – The Economic Diversification Score (EDS)

Astrid Schuch

The economic diversification score provides an easily calculated framework for the purpose of measuring economic diversification and comparing individual countries with respect to economic diversification.

The calculation is based exclusively on the gross domestic product (GDP) by kind of economic activity for each individual country as published by UNCTAD. It does not focus, for example, on exports or cyclicality.
The data set used ranges from 1980 to 2003. Furthermore, the formula used works with the supposition that the global GDP is more diversified than any individual country. The table below displays a part of the data used.

Table X: GDP by kind of economic activity (% of total GDP, 2003)

	Agriculture	Industry	Manufacturing	Services
World	3.61	26.78	15.84	65.88
Algeria	9.83	50.52	5.61	36.93
Angola	15.47	57.39	4.70	26.08
Azerbaijan	13.14	49.93	8.04	30.50
Chad	29.91	25.29	23.27	40.56
Iran	11.04	39.10	10.96	48.20
Iraq	12.09	101.92	1.48	31.37
Kazakhstan	7.86	35.08	14.22	51.69
Kuwait	0.53	58.49	7.21	44.64
Libya	8.77	50.08	5.81	41.50
Mexico	3.48	23.39	16.30	64.85
Nigeria	25.72	48.24	3.88	23.58
Norway	1.32	33.13	10.46	55.94
Russia	4.90	30.95	24.50	54.40
Saudi Arabia	4.57	54.44	10.16	41.49
Syria	25.30	28.66	4.21	46.04
United Arab Emirates	3.14	53.47	13.68	44.47
Venezuela	4.22	38.71	11.55	53.78
United States	1.41	21.71	13.91	77.25
Germany	1.04	26.63	20.60	65.31
France	2.32	19.37	12.61	68.25
EU25	1.92	24.30	16.45	65.39

Working in this manner, global GDP by kind of economic activity is the baseline. Economic diversification of each individual country is then calculated by comparing the country's sectoral contribution to its GDP with that of the baseline figure. This is done by calculating the standard deviation of each country's economic activity from the world average.

The formula for the standard deviation is as follows:

$$s = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(x_i - \overline{x})^2}$$

whereby in this case the mean average is the world GDP by kind of respective economic activity, x(i) is the country's GDP by kind of respective economic activity and N is equal to four, since there are four main sectors.

The standard deviation of Iraq's GDP by kind of economic activity from the baseline was approximately 35% in 2003 which is in contrast to Norway's, which was barely over 6% for the same period. As demonstrated, the higher the standard deviation the lower the diversification of the respective country.

As the next step a scoring mechanism was established, classifying each country with respect to its standard deviation.

As table X shows, the scores rank from zero to ten, whereby ten represents a perfect match with the sectoral contribution to the world GDP and, therefore, the higher the score, the more diversified the economy.

Table X: Economic Diversification Score

EDS	Standard Deviation (%)	
	<	>=
0	44.12	39.82
1	39.82	35.52
2	35.52	31.22
3	31.22	26.92
4	26.92	22.63
5	22.63	18.33
6	18.33	14.03
7	14.03	9.73
8	9.73	5.43
9	5.43	1.13

The minimum and maximum standard deviation observed across the data set are equal to 1.13% and 44.12%, respectively. Hence, the width of each class amounts to approximately 4.30 percentage points.

To illustrate this mechanism consider the EU25 and Algeria. The standard deviation of the two countries' GDP by kind of economic activity from that of the worlds' in 2003 was equal to 1.66% and 20.61%, respectively. Since firstly, the standard deviation of the EU25 falls in between 1.13% and 5.43% and secondly, is only just higher than the 1.13%, the EDS for the EU25 is 9.88, essentially representing a perfect match with the world and therefore the EU25 can be considered to be highly diversified.

The EDS of Algeria is 5.47, because its standard deviation is close to the middle of 18.33% and 22.63%.

For further questions and elaborations, please contact Astrid Schuch at AS@montanacapital.at

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