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Managing the Resource Curse
Strategies of Oil-Dependent Economies in the Modern Era

This paper is a part of "Comparative Analysis and Policy Proposals Aimed at Diversifying the Russian Economy and Enhancing Prosperity" project, supported by the UK Foreign and Commonwealth Office.

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Introduction

This is the first in a series of studies conducted as part of a program to analyze historical precedents and develop recommendations on how to diversify resource-based economies. The project is being implemented by the Carnegie Moscow Center with financial support from the U.K. Foreign and Commonwealth Office. In addition to creating a large volume of analytical material, its aim is to formulate specific recommendations for countries undergoing or emerging from a resource boom. (These recommendations will of course depend on variables such as the size of the population and economy, the institutional framework, political and economic history, and the proportion of these resources in the GDP.) The main focus of the project is Russia.

As the world reaches the end of an almost fifteen-year period of abnormally high hydrocarbon prices, it makes sense to limit the research to countries that experienced hydrocarbon dependence at the beginning of the twenty-first century and to assess the success of different approaches to economic diversification adopted by those countries. This is particularly relevant for Russia, a country whose economy and political system have changed significantly thanks to the inward flow of petrodollars.

This study contains comparative descriptions of the economic development of ten countries, all of which are leaders in the production and export of hydrocarbons. The research covers a period lasting through the second half of the twentieth century up until the present day. Despite huge differences in the different cases—ranging from civil war and revolution to sustainable prosperity, from welfare states to nations with shocking inequality, from very open to completely isolated economies—we can still draw several interesting conclusions from the comparative study.

In all cases, in countries with very different political systems and economic policies, abnormal revenues from the export of abundant mineral resources have had the effect of distorting the economy.

Achieving economic diversification in countries dependent on oil exports is a major challenge. Most diversification strategies have failed, and there are no examples of countries that have successfully managed to fully diversify away from oil. The success or failure of a diversification strategy depends above all on the implementation of appropriate economic policies. But most governments are conservative: even amid falling oil prices, a government with access to natural resources generally manages to preserve the structure of the economy without experiencing any social upheaval.

Moreover, our study shows that diversification, which is always a long and slow process, usually grinds to a halt during periods of rising oil prices.

Some factors do have a positive impact on states that are attempting this strategy. They include the openness of the economy, a government's ability to attract foreign capital, and the removal of trade barriers. In none of the cases examined here did these policies lead to a new economic dependence or to a change in the political system.

A powerful country, which acts as a partner to the resource-dependent economy and derives economic benefit from the availability of its cheap labor and access to its territorial resources, can play a key role in the process of diversification, without increasing the economic risks.

Experience shows that when reforming the economy to lessen dependence on resource revenues, it is important to maintain people's incomes through mechanisms such as the welfare state or a centralized redistribution of wealth. It is dangerous for the stability of the state if it ignores the interests of large social groups when it is undergoing reform.

Another useful tool is found in sovereign funds set up during periods of economic growth resulting from high oil prices. They can be used in transition periods to fill gaps in public sector financing caused by reduced revenues from resource exports and to maintain liquidity in the economy. These funds will work best if they are managed as much as possible as if they were private equity funds.

The competence and management experience of those implementing the policies is another key factor, which means that attracting foreign managers can have a positive impact. That makes tackling corruption a high priority, whether by adopting modern standards of transparency, integrating the country into the global legal environment, adopting international regulation standards, or moving the country toward a British-style legal system.

There is a strong correlation between the success of countries in showing that doing business is a low-risk activity and their success in fighting resource dependency and promoting diversification. Risks for investors increase not only if a system is too weak to protect economic rights, but also if a government is inconsistent and unable to take responsibility for enforcing social and business contracts, in the broadest sense of that term.

If there is an effort to develop non-oil industries then a policy of import substitution—promoting domestic production at the expense of imports from abroad—tends to stunt economic development. Uncompetitive manufacturing companies spring up, which require subsidies from the resource sector. As consumer incomes rise as a result of the distribution of export revenues, the products of these companies still end up being displaced by imports.

On the other hand, a policy of diversification of exports, even if starts from an initially weaker base, allows the use of investment from resource sectors to create a competitive industry and service sector, even if the share of imports increases because of consumption. With this in mind, concerns about the creation of high-tech industries with high added value in the absence of a visible competitive advantage are unwarranted. Experience shows that the creation of high-tech clusters such as these ends up being a success, if all other conditions are met.

The redistribution of revenue from resources can be effected in two ways: either through a policy of obtaining greater revenues from these resources, coupled with a reduction in taxation, or through lower resource revenues and increased taxation. The first method leads to more stratification but greater diversification by increasing the motivation to create alternative businesses and obtain non-resource income. The second method creates a more even distribution of income but reduces the diversification of the economy.

A rise in public spending, including investments in any area, pushes the economy toward businesses with low added value, a process that has a negative impact on the overall growth and diversification of the economy. It is clearly preferable to pursue a policy of creating state reserves, limiting public sector spending, and creating the conditions to attract private and foreign investment.

The most important challenge in diversifying the economy is to keep the costs of non-oil industries to an acceptable level. As labor costs comprise a significant component of the overall costs, efficient cost-cutting measures include:

—differentiated tax cuts (in particular on corporate income, staff wages, and personal income) in areas not related to natural resources

—other forms of subsidies, such as on exports

—attracting cheap labor from abroad for non-resource industries

As the first two measures risk reducing the competitiveness of non-resource industries, a policy to actively attract labor migrants appears to be the most beneficial of these options.

Venezuela: Oil Plus Socialism

ALEXANDER ZOTIN

Venezuela has experienced several periods of oil boom and bust over the course of the twentieth century, emerging weaker from the cycle each time. The beginning of the twenty-first century brought with it additional complications: petrodollars allowed the country to experiment with radical socialist policies. This twenty-first-century Bolivarian socialism brought the country to the brink of a humanitarian catastrophe.[1]

Venezuela, located in the northern part of South America, has a population of 31.1 million people. Its rate of population growth from 1950 to 2015 was significantly higher than the global average: 2.67 percent on average (1.41 percent in 2010–2015) compared with the global growth rate of 1.66 percent (1.18 percent in 2010–2015). The population is quite young, with a median age of 27.4 (the world average is 29.6).[2] Ethnic groups include descendants of immigrants from Spain, Italy, Portugal, Germany, Africa, Arab countries, and indigenous peoples.[3] The main language is Spanish, and the main religion is Catholicism.

The discovery of oil fields in Mene Grande near the Gulf of Maracaibo in 1914 marked the beginning of Venezuela's oil history. The proportion of oil in the country's exports grew rapidly, from 1.9 percent to 91.2 percent in the period from 1920 to 1935. At the same time, the oil industry began to attract more labor, coming primarily from the agriculture sector (coffee was traditionally a major Venezuelan export). During this period, the rising price of the Venezuelan bolivar against the U.S. dollar resulted in domestic production becoming less competitive. In 1940, the government realized it was cheaper to import many goods than to produce them domestically.[4]

In 1943, taxes on international oil companies' revenues were hiked. This, in turn, dramatically increased government dependence on the oil sector and reduced the role of public taxpayers, which, according to Professor Terry Karl, led to the development of an unhealthy democracy with authoritarian tendencies due to the lack of need to report on government use of the relatively small proportion of tax revenues drawn from the general public.[5]

Aware of the economy's dependence on imports, in 1960 the government introduced a policy of import substitution, a fashionable policy at the time across Latin America, authored by the Argentine economist Raul Prebisch.[6] Immediately upon receiving government transfers, Venezuela's nascent

domestic industry lost any motivation to improve product quality or increase productivity. Although GDP grew by 4.6 percent per year between 1960 and 1974, the effectiveness of investment fell and per capita GDP growth rates declined.[7]

Dutch disease meant that in 1972, agriculture accounted for half of what was expected in the non-oil GDP, while the industrial sector accounted for only two-thirds of the expected volume, according to estimates by the British economist Richard Auty.[8]

The oil crisis of 1973 led to a significant increase in government revenues: in 1975, the government earned $9.68 from each barrel of oil sold abroad, compared with $1.65 in 1972. This led to a sharp increase in government spending. In 1973, Carlos Andres Perez won the presidential election and embarked on a megaproject to create "Great Venezuela." This period in the country's history is known as Venezuela Saudita (Saudi Venezuela), during which Perez created a system of subsidies later built upon by Hugo Chavez.

The plan involved not only the expansion of state involvement in the labor market through job creation and increasing salaries, but also attempts to diversify exports through government intervention in the non-oil sector of the economy. Most new jobs were created in the public sector and financed by the government, fostering a growing demand for petrodollars to pay salaries.[9]

The subsequent drop in oil prices predictably caused a budget deficit, the growth of public debt, and the cancellation of further large-scale plans. For twenty-three years after 1979, non-oil GDP per capita fell by 0.9 percent per year (the total decline for this period amounted to 18.6 percent), although during this time there was growth in the workforce, which, all other things being equal, should have had a positive effect on this indicator. The non-oil GDP divided by the number of workers employed in non-oil sectors of the economy fell by 1.9 percent annually and by 35.6 percent over the course of the entire period.[10]

Venezuelans know February 18, 1983 as Black Friday. It was the day when the bolivar collapsed dramatically against a backdrop of growing external debt and falling oil prices (average prices declined to $29.50 in 1983, from $32 in 1982 and $33 in 1981). This undermined the well-being of the majority of the country's population, and the state was left unable to finance its social programs. Saudi Venezuela was history.[11]

Another downturn in oil prices in 1980 put additional pressure on the government. By 1989, the central bank had almost completely run out of foreign reserves.[12] Venezuelans remember the bloody Caracazo riots that followed the presidential election in 1989, when Perez won his second presidential term. His first term had been during the oil boom, but by the end of the 1980s, oil revenues had fallen dramatically and Perez decided to begin anew with a term of reforms. These reforms caused gasoline prices to double (from next to nothing), leading to riots, military intervention, and the

deaths of about 300 people, though according to unofficial data, there may have been up to 2,000 casualties. Caracazo was a prelude to the revolt in 1992 and the subsequent ascendance to power of Chavez.

THE HEADY 90S

The last decade of the twentieth century witnessed a gradual decline of confidence in the existing political establishment. The availability of huge oil wealth and constant promises by politicians about impending improvements to the general quality of life inflated public expectations of economic development, but this was constantly hampered by resource dependence. At the same time, the idea of reforming the economy was not popular among the public and politicians alike, as it was inevitably associated with transformational recession.

Against this backdrop, it was only a matter of time before a public figure preaching socialist populism emerged. Rhetoric about the national wealth not benefiting the country because it was being amassed by corrupt politicians quickly found an audience.

That figure was the Venezuelan army officer Hugo Chavez. He had attempted a coup back in 1992, but failed and ended up in prison. Public opinion was behind him, however, and a few years later he and his supporters were given amnesty.

In 1998, Chavez won the presidential election. A new economic program was implemented in Venezuela: twenty-first-century Bolivarian socialism. The combination of populism and resource wealth, magnified by a new wave of rising oil prices, resulted in incredible state expansion, the growth of authoritarian tendencies, and a subsequent economic downturn.

MORE FOR THE PEOPLE

Power, bolstered by a large amount of rent, often relies on the distribution of revenues among a relatively narrow circle of individuals who provide support to the regime. In the case of Chavez's socialist project, however, the rent went first to the section of the population with low incomes. It was appealing to them, rather than to the establishment, and allowed Chavez to sustain high public support throughout his reign.

Immediately after the 1998 elections, Chavez began to implement his plan to change the constitution. Despite congressional resistance, he managed to hold a referendum on a proposal to convene a meeting of the so-called constitutional assembly. Over 87 percent voted for the proposal, and the country held elections to a constitutional assembly in accordance with the results of the referendum.

Opposition parties boycotted these elections, granting 123 seats out of 131 to the president's supporters. The assembly passed a number of authoritarian laws, including the abolition of the upper house of the Venezuelan Congress, the transfer of powers from the regions to the center, the granting of the right to convene referendums to the president, and enhanced presidential control over the military. Seventy-nine percent voted for the new constitution, and Chavez was subsequently reelected president in 2001 with 59.7 percent of the vote.

A two-day coup in April 2002 failed after thousands of Chavez supporters took to the streets, and in a 2004 referendum on removing the president from office, Chavez supporters gave him 59.9 percent of the vote. He was subsequently reelected in 2006 with 63 percent of the vote, and in 2012—his last election—with 55 percent. In the lead-up to every election, Chavez was able to mobilize his electorate.

Toward the end of each election cycle, generous social programs aimed at supporting low-income households were launched. On the eve of the 2004 referendum, the Central Bank and Petróleos de Venezuela, S.A. (PDVSA), the Venezuelan state-owned oil and natural gas company, turned to their reserves from oil exports to fund these programs.

Chavismo combined the features of participatory democracy and clientelism. On the one hand, the regime repeatedly resorted to the mobilization of Chavez supporters, asking them to participate in political life. On the other hand, access to revenues was strictly dependent on political beliefs. The relationship of these two features led to the formation of a quite extensive clientele.[13]

SOCIAL "SUCCESSES"

Many researchers have noted that inequality fell under Chavez. Looking at the Gini coefficient,[14] which measures inequality, it is clear that by the start of the 2010s, inequalities in Venezuelan society had indeed decreased. In 1998, the Gini coefficient was 49.5, and by 2009 it had dropped to 41. However, first it is worth noting that inequality also decreased in other Latin American countries at the same time. Second, it is possible that the decline in inequality was due to Venezuela's elite seeing their wealth shattered by expropriations. In addition, the quality of Venezuelan official statistics is, to put it mildly, not ideal.

Poverty had also decreased by the end of the 2000s. In 1999, about 42 percent of households were considered poor, and 17 percent of families were classified as "extremely poor." By the beginning of 2007, those figures had decreased to 28 percent of households and 8 percent of families.[15]

Access to education increased. In 2006–2007, universities accepted 86 percent more students than in 1999–2000. During this same period, there were 54 percent more boys and girls in high school, and 10 percent more in primary education. Schools introduced free meals.

The official unemployment rate also fell due to social programs aimed at creating jobs. In 1999, at the dawn of the Chavismo era, unemployment was 15.6 percent. By 2008, it had dropped to 8.2 percent. The downside of these programs was that it was extremely difficult and, ultimately, prohibited to dismiss personnel without the consent of appropriate government agencies. These policies protected all employees, including negligent ones, and discouraged job creation.

THE DARK SIDE OF TWENTY-FIRST-CENTURY BOLIVARIAN SOCIALISM

All of these "successes," unfortunately, proved to be unsustainable, and official statistics on the subject are misleading. Even before the drop in oil prices, Venezuela had entered a large-scale crisis. By the early 2010s, the budget deficit was over 10 percent of GDP, and inflation reached 50 percent a year. At that rate, twenty-first-century Bolivarian socialism was doomed to fail.

The fundamentals of Chavismo are not unique to Venezuela, or even to Latin America. Chavismo is, however, a rather radical incarnation of standard Latin American populism. In their book *Macroeconomics of Populism in Latin America*, the American economists Rudiger Dornbusch and Sebastian Edwards define it as: "Politics accented by the redistribution of resources with a lack of attention paid to inflationary and fiscal risks, and an underestimation of the reaction of the economy to non-market measures by the government."[16] The consequences of such politics have been experienced at one time or another by almost all the countries in the region.

Venezuela itself, as noted by the economist Anabella Abadi, experimented with price controls as early as 1939. The novelty of Chavismo lies in its radicalism and in the fact that by the second decade of the twenty-first century, Venezuela was virtually the only outpost of this economic absurdity.

The economic essence of Bolivarian socialism is quite simple. It is a non-market system with regulated prices for basic goods (products for *precio justo*—"a fair price," which is usually several times lower than the market value). The exchange rate of its national currency, the bolivar, is regulated.[17] There are various programs (whose effectiveness is doubtful) aimed at benefiting the poor. More than 5 million hectares of private business and land was expropriated by the state, prompting claims worth $17 billion against Venezuela in the International Centre for Settlement of Investment Disputes, relating to all expropriations during the reigns of Chavez and his successor Nicolas Maduro.[18]

Alas, Chavismo doesn't work. Lowered prices lead to shortages, and selling products at artificially low prices discourages production. Jobs are not created in industry and agriculture, since everything is imported. Goods purchased at "precio justo" are resold at market prices. The two currency rates create conditions for corruption, since officials with access to cheap rice or dollars can become millionaires simply by reselling them at market prices. Land and companies expropriated under

Chavismo are not put to good use. Foreign companies operating in Venezuela have difficulty repatriating their profits.

Chavismo is also expensive: the budget deficit in Venezuela has constantly been in double digits since 2009 (economists at Bank of America Merrill Lynch estimate that subsidies are worth 10 percent of GDP).[19]

This socialist experiment would not have been viable without the money financing a fantastically inefficient and corrupt economy. Oil or *coca negra* (black cocaine), as it is called in the country, is the main source of this wealth, accounting for 95 percent of export earnings. On top of the populism of Chavez and Maduro, the country is suffering the symptoms of Dutch disease: a reduction in the competitiveness of economic sectors that are not directly related to the extraction of raw materials.

HUMANITARIAN CATASTROPHE?

With oil prices having halved since 2014, social and economic problems have grown rapidly. Revenues from exports dropped from $74 billion in 2014 to $37 billion in 2015. Imports were impacted, but less so, dropping from $51 billion to $39 billion. Alone, these numbers are similar in scale to the recession experienced by many oil-producing countries, but in Venezuela by 2016, there was a major deficit of "fair priced" goods.

According to the International Monetary Fund (IMF), Venezuela's GDP fell by 3.9 percent in 2014, by 5.7 percent in 2015, and was forecast to fall by 8 percent in 2016.[20] Poverty, supposedly defeated by Chavez, quickly reached record levels as soon as oil prices fell. In 2015, extreme poverty reached 49.9 percent of households, with standard poverty reaching 23.1 percent[21] (as a reminder, in 2007 those figures were 8 percent and 28 percent, respectively). In 2014, inflation reached 63 percent, in 2015 it grew to 275 percent, and in 2016 the country saw real hyperinflation. As a response, the government resorted to the printing press. In 2016, the *Wall Street Journal* reported that thirty-six aircraft delivered fresh banknotes to the country.[22]

Though there is no widespread hunger, there is a shortage of food and other goods at state prices. There is not enough medicine, rice, flour, soap, sugar, or even toilet paper. A lot of things can be bought on the market—but only in exchange for a lot of money, like in the Soviet Union of the late 1980s.

For context, the salary of a professor of chemistry at the University of Caracas is 40,000 bolivars, or $25 at the market rate, with a majority of the population receiving the $20 minimum wage. And here lies the secret of the "success" of Chavismo in reducing poverty: the poverty level is calculated at the official exchange rate of the bolivar, whereas at the market rate, even the upper middle class

lives on the verge of poverty. To purchase goods at *presio justo*, poor people have to stand in line for hours in the hope that something will be delivered to stores. Often these crowds degenerate into riots.[23]

"The distortion of the exchange rate and prices has created economic arbitration, in which too many claimants vie for the reduced flow of petrodollars" says a report by BofA Merrill Lynch entitled *Venezuela Viewpoint: The Red Book*. "This has created a paradoxical situation: a country that has spent $51 billion in 2014 and $39 billion in 2015 ($1,660 and $1,200 per capita, respectively) on imports, suffers from a lack of basic goods, which are sufficient in poorer countries."

The paradox can best be explained in the following way: officials purchase goods in large quantities, which are then shipped to neighboring Colombia, where they are resold at normal market prices. The Colombian city of Cucuta has long been a center of smuggling[24] and is the largest market for the exchange of bolivars for dollars.[25] Officials and businessmen close to them—so-called *boligarchs*—cash in on the smuggling, along with border control (and drug trafficking) army generals. These are the main clans that control decision-making in the country.[26]

Another scenario is that goods purchased at state prices are sold domestically at market prices. Either they are sent there directly by corrupt officials or by people who have virtually made a profession out of standing in line for hours a day and then reselling the goods on the market (so-called *bachaqueros*).[27] For many residents of large cities, this is almost the only way to earn money.

The existence of a deficit, despite the significant flow of petrodollars, is a paradox that is characteristic of the socialist management of the economy, and can also be observed in non-trade sectors. A good example of this paradox is electrical power, which under Chavez became subject to major disruptions across the country.[28]

Under Chavez, the country's main power company, Electricidad de Caracas, was nationalized in 2007, and artificially lower energy prices were announced.[29] As a result, consumption jumped dramatically: in Colombia, for example, it is three times lower per capita than in Venezuela.[30] With an almost free resource, there is no need to save.

The burden of demand was also drastically increased due to electrical appliances available at discounted *precio justo* prices under the social program "Mi Casa Bien Equipada" (My Well Equipped Home).[31] As a result, "cheap" electricity at bargain prices has proved to be very expensive: because of the outages, many enterprises and even the Caracas subway have had to install diesel generators.[32]

Deindustrialization is widespread, with production figures for cars, steel, and cement plummeting in the past few years.

THE DECLINE OF OIL PRODUCTION

Venezuela's economic crisis has also affected oil production. Throughout the twentieth century, Venezuela, like many other oil-producing countries, attempted to get as much oil revenue as possible from drilling companies. Initially the government only introduced a fee for the concession agreement and expected a small percentage of production revenues. However, over time the government claimed an increasing share. In 1943, Venezuela required oil companies to share half of their revenues with the state. By 1970, the government received 55 percent. In 1976, with a global wave of nationalization sweeping the oil sector, the state company Petróleos de Venezuela, S.A. (PDVSA) was created.

Rising oil prices in the early 2000s, and the resulting increased revenue from oil and gas production, led to growing claims by the state over the oil sector. After Chavez came to power, public expenditure grew steadily. In 2002, Chavez wanted more control over the main source of the government's revenue: PDVSA. The company's management resisted the president, which resulted in the dismissal of several senior managers.

In December 2002, PDVSA employees went on strike against the policies of Chavez, demanding early elections. As a result, 19,000 employees were dismissed and replaced by untrained Chavistas. Rafael Ramirez, a committed Chavista appointed to head PDVSA, announced that "anyone who does not support the revolution can get out and go to Miami."[33] A new ministry was created to function as the company's management, and the PDVSA became the largest donor to the country's social programs.

As part of the PDVSA, a foundation for the social and economic development of the country (Fondespa) was set up. From 2003 to 2008, PDVSA spent more than $2.3 billion on various social programs in Venezuela. In addition, the company served as the "employer of last resort" for Chavez supporters.[34]

In 2007, Chavez expropriated all the Venezuelan oil assets of ExxonMobil and ConocoPhillips after the companies refused to give PDVSA a majority stake and control of their projects in the Orinoco Delta. Total, Chevron, Statoil and BP agreed to Chavez's terms and reduced their share in Venezuelan projects to a minority. Venezuela has the world's largest proven oil reserves, according to the BP Statistical Review, at 46.6 billion tons, the equivalent of 17.5 percent of the world's reserves. But these huge reserves, which are mainly located in the Orinoco Delta, are quite difficult to extract due to the high density of the oil. Developing the technology required is only possible with the resources usually available to large international companies.

Squeezing foreign companies out of Venezuela was not without cost. The country's oil production fell from 3.2 million barrels per day in 2001 to 2.6 million barrels per day in 2015. In addition, Venezuelan oil is now trading at a huge discount to the main American variety, West Texas

Intermediate (WTI). In May 2016, this discount reached 25 percent, while previously, Venezuelan oil was trading at about the same level as the WTI, and in 2011–2013 at a premium to WTI.

"There are several reasons for this," says Daniel Urdaneta-Zubalevich, a strategist at the Venezuelan Knossos Assets Fund. "Firstly, the production of light and low sulfur grades is being gradually replaced by production from fields where the oil is worse. Secondly, after the departure from the country of a number of foreign oil service companies, it is more difficult to maintain the desired level of quality. Thirdly, Venezuelan suppliers are having difficulties with bank financing and insurance, and are therefore forced to give discounts to customers."[35]

Oil revenues have decreased, but Venezuela still has debts it has to pay. "Revenues from oil exports at current prices (about $50 per barrel of WTI) are about $3 billion. Net revenues, excluding costs, are lower, about $1.5 to $1.8 billion a month, while the average monthly expenditure for payment of debts is $0.75 billion," says Urdaneta-Zubalevich.

Calculating the ratio of debt to GDP is no trivial task, as it's not clear what rate to use to calculate it. At market rates, Urdaneta-Zubalevich estimates it at 200 percent of GDP.

According to the most current IMF data from 2015, the account surplus was replaced by a deficit of 7.8 percent of GDP in 2015 and 3.4 percent in 2016. This was seemingly a consequence of lower oil prices and the deterioration of the trade balance from a profit in 2000–2010 to zero in 2015. Again, it is important to note that Venezuelan statistics are highly inaccurate due to multiple exchange rates in use.

So why doesn't Venezuela simply default, given the critical situation in the country? PDVSA holds significant assets abroad, particularly in the United States, including the major refiner Citgo Holding Inc. In the event of a default, these assets will be seized and the cash flow of PDVSA will suffer, making it very difficult for the company to sell its oil. Furthermore, the purchase of lighter grades of oil from the United States by PDVSA to mix with their ultra-heavy varieties would be a more difficult process to implement following a default.

If the price of oil falls to $30 per barrel, the risk of a default will increase. However, even at $50 per barrel, the company cannot cope with its debt payments. On October 6, 2016, PDVSA announced a swap on its bonds, offering bondholders the opportunity to replace bonds maturing in 2017 with bonds maturing in 2020, with an additional pledge that bonds maturing in 2020 would be backed by American PDVSA assets: 50.1 percent Citgo Holding Inc. Just under 40 percent of PDVSA bondholders agreed to the deal.

REVOLUTION AHEAD?

The current situation in Venezuela could be described as pre-revolutionary. Huge lines in Caracas and in other cities across the country threaten to escalate into riots and revolution, but it is impossible to predict when and where it will reach a critical level. That said, at the beginning of 1917, Lenin expressed disappointment that his generation was unlikely to see a revolution.

Opposition is strong in the country, and a coalition of anti-Chavez parties, Mesa de la Unidad Democrática, obtained a parliamentary majority at the end of 2015 and spent most of 2016 trying to impeach Maduro. The opposition, however, is fragmented and does not have a recognized leader. Possible candidates include the head of the Voluntad Popular party, Leopoldo Lopez, who has been in prison since 2014 for organizing street protests. The former opposition leader, Henrique Capriles Radonski, has lost some popularity in the past three years because of compromises he has made with respect to the authorities.

Sporadic riots are well suppressed by the authorities. In the resolution of this political standoff, another factor is critical: whom the army sides with. Scholarship on coups suggests that the securement of the army is more or less the main factor influencing the likelihood of a coup—and in Venezuela, where the military plays a central role in society, even more so. In the twentieth century, the country saw twelve military coups.

"Chavez and then Maduro bribed the army," says Urdaneta-Zubalevich. "The army owns a large number of businesses, including BanFANB bank, the raw materials company Camimpeg, and CASA, the food supplier to the Ministry of Food. The military also owns a huge number of companies via shell structures."

Unlike Chavez, Maduro does not have a military background: he is from a leading trade union family. But the most influential military personality in the Maduro retinue is the former speaker of parliament who resigned at the beginning of 2016, Diosdado Cabello. This friend of Chavez's participated in the unsuccessful coup against President Carlos Andres Perez in 1992 and later supported Chavez during the brief putsch attempt in 2002. Since the death of Chavez, Cabello has almost become a more powerful figure in the country than Maduro.

Despite the privileged position of the army under Chavismo, it is impossible to exclude the possibility of a military coup or a popular revolt with the support of the army. The breakup of the state following the Colombian model of the late 1990s is unlikely. In Venezuela, unlike Colombia, there are no strong centrifugal tendencies. Twenty years ago Bogota controlled only 40 percent of the country; the remaining 60 percent was under the control of the leftist rebel group FARC (Revolutionary Armed Forces of Colombia) and paramilitary drug cartels. In Colombia, cocaine had become a resource base for various paramilitary groups. Cocaine is easy to manufacture, and transport routes are flexible and

can overlap. Venezuela's main resource, oil, depends on pipelines, and the government's control of them is a major constraint on the viability of any group that might seize control over an oil deposit.

Venezuela is a unique case of twenty-first-century economic mismanagement. The country is rich in oil resources but on the brink of a humanitarian catastrophe due to the socialist experiments of Chavez and Maduro. These, in turn, would not have been possible without the funding provided by oil revenues.

NOTES

1. In this text, the author has drawn on his own material from *Money* magazine, published by *Kommersant.*
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Angola: Twofold Deindustrialization

VLADIMIR GRIGORYEV

The history of independent Angola is the story of a country under the influence of two powerful factors with a similar deindustrializing effect: the civil war from 1975 to 2002, and oil exports from 2002 to the present. During the war, the need to fight a military campaign led to a preference for assets that were easier to control, and in peacetime the growing high-margin oil sector resulted in the Dutch disease, which has hampered the development of other sectors of the Angolan economy.

Angola, a country on the southwest coast of Africa, has a population of 25.8 million people. The annual growth rate of the population between 1960 and 2015 was 2.8 percent on average—significantly higher than the global growth rate of 1.66 percent—though it slowed to 1.18 percent in the period from 2010 to 2015, according to World Bank data. Angola's population is very young, with a median age of 16.2 years, compared to the global average of 29.6 years.[1] The largest ethnic groups are Ovimbundu, Kimbundu, and Bakongo, but the main language—Portuguese—and the main religions of Catholicism and Protestantism are both legacies of colonialism.[2]

The first industrial oil fields were opened in the 1950s. The Portuguese oil and gas company SACOR established a subsidiary, SACOR Angola, to manage these assets, and it began production in the mid-1950s in cooperation with other international oil companies.[3]

In this era of late colonialism, the Portuguese government began increasing its investment in its colonial possessions by building dams, hydroelectric, and transportation infrastructure in the 1950s. In Angola, the Portuguese government invested in the production of raw materials and goods, which were intended to be built into a production chain with the final product being produced in Portugal.[4]

As part of this chain, the Angolan economy showed good growth rates from 1961 to 1973, with an annual average of 4.7 percent. The main exports during this period were sisal, coffee, cotton, diamonds, and iron. It was not until 1973 that oil topped the list of goods exported from Angola, with 150,000 barrels a day leaving the country. Angolan heavy industry actively grew at the expense of the production of consumer goods and light industry. On the eve of the country's independence, Angolan heavy industry was meeting more than half of domestic demand, with annual growth rates increasing from 6.9 percent in 1972 to 14.3 percent in 1973.[5]

The Carnation Revolution of 1974 brought independence to the Portuguese colonies, including Angola. The following year the Angolan government signed an agreement with its former colonizer, and the previously Portuguese oil company Angol, which oversaw the oil and gas sector in Angola, came into the hands of the new Angolan government. This government, headed by Agostinho Neto, who had been the leader of the People's Movement for the Liberation of Angola (MPLA), formally adopted a socialist ideology in 1976, beginning the process of full-scale nationalization.

The civil war that immediately followed independence was obviously not conducive to the development of diverse economic activities with long-term planning. Moreover, the dominant MPLA party urgently needed funds for its military campaign. The colonial-era oil and gas sector was more important than ever.

Oil production was concentrated in regions that were easier to defend than the vast agricultural lands. Following the 1973 Arab-Israeli War, skyrocketing oil prices only increased the value of these assets. However, the lack of skilled labor allowed for only a partial nationalization of the oil and gas sector. Gulf Oil, Texaco, and other international oil companies were not forced to stop their work after Angola gained its independence. Despite the civil war, they continued to develop new projects. After the discovery of the Girassol oil field in 1996, investment from giants such as BP, ExxonMobil, Royal Dutch Shell, and others flowed into Angola.

The recently nationalized domestic oil and gas company Angol, now renamed Sonangol, initially limited its operations to the issuance of concessions and tax collection, but over time, learning from the experience of Italy's ENI, Algeria's Sonatrach, and other companies, became increasingly involved in direct production.[6]

During this period, other sectors of the economy, including the production of sugar, coffee, sisal, and related agricultural activities, were in decline. According to the MPLA, more than 80 percent of plantations were abandoned by their Portuguese owners immediately after independence. Of 692 factories, only 284 continued to operate, and 30,000 skilled workers left the country. Many sites, with already poor infrastructure, were completely destroyed.[7]

The civil war centered around a conflict between the ruling MPLA and the UNITA movement and lasted for twenty-seven years until 2002. The conflict became a proxy for the Cold War, which further challenged the rehabilitation of industry and agriculture. Fidel Castro sent a battalion to help the MPLA, while the Soviet Union and East Germany sent military trainers and pilots. Support for UNITA came from the South African army. The Angolan government spent enormous amounts of money on the purchase of Soviet weaponry, with some of it bought on credit.

Despite imperfect data on Angola's GDP from the last sixteen years of war (see Appendix) the deindustrialization effect is clearly visible. Most factories have not yet returned to their prewar output.

In agriculture, tobacco production is the only sector that falls less than 50 percent short of 1975 output levels. Metal mining, metallurgy, and the chemical industry account for only 10 to 20 percent.[8]

The relatively quiet period of 1985–1991, when agriculture gradually grew from 13.8 percent of GDP in 1985 to 24.2 percent in 1991, ended with a recession in 1992, after which this proportion dropped back down to 10 percent due to the failure of a peace agreement, elections, and renewed hostilities. Throughout the 1990s, manufacturing did not account for more than 6 percent of Angola's GDP.[9]

Looking at absolute figures (see the Appendix comparison of the added value of industry and agriculture) gives an even clearer picture of the impact of war on the economy and on the stability of the oil sector. Agricultural output halved in 1992, which corresponds to the data on its proportion in GDP. But industry, which the World Bank classifies as including oil production, barely seems to have been directly affected by the end of the Angolan civil war. Thanks to the oil and gas component in 1993, production fell only slightly compared to 1992 and 1991, and even increased in 1994. As noted previously, international oil companies readily invested in Angola's oil sector, even during the fighting.

At the end of the civil war in 2002, the government and the Angolan economy were heavily dependent on the hypertrophied oil sector. Oil accounted for 90 percent of the country's exports, oil revenues formed at least 75 percent of the budget, and half of the country's GDP came from the oil industry.[10] In 2000, the proportion of Angolans living on less than $1.90 a day was about 32 percent, while about 54 percent of Angolans were living on less than $3.10 a day.[11]

THE POSTWAR PERIOD: A SPECIAL CASE OF DUTCH DISEASE

During the last fifteen years of peace, Angola's economy has undergone significant structural changes, but the hypertrophic resource sector continues to dominate. At the same time, the lack of development of the manufacturing sector means that most consumer products have to be imported in exchange for petrodollars. The construction and services sectors, which according to the laws of the Dutch disease should have received a boost as part of the growing oil economy, have mostly been outsourced to Chinese companies and labor.

Dilapidated infrastructure, weak agriculture and industry, a lack of skilled labor, and one of the poorest health systems in the world are all challenges that plague postwar Angola. Typical catch-up development through lenders such as the International Monetary Fund failed in the immediate aftermath of the war, since these institutions were not on the best of terms with the authoritarian government of President Jose Eduardo dos Santos, the leader of the MPLA. The Angolan government tried making direct appeals to the leaders of Japan and South Korea, but these were rejected in order

to encourage the country to form a better relationship with the IMF. The Chinese government, however, agreed to fund large-scale restoration projects in 2004 in exchange for oil contracts with the Angolan government.

Over the next decade, oil production doubled. The year the civil war in Angola ended, the country produced 800,000 barrels of oil per day, compared with 470,000 in 1990. By 2008, it was producing about 2 million barrels.[12] In 2015, producing 1.77 million barrels per day, Angola surpassed every other oil-producing country in Africa, including Nigeria, although the days of peak production had already passed. As of the end of 2015, Angola had the sixteenth largest proven oil reserves, with a production capacity of 12.7 billion barrels a day, putting it almost on a par with Algeria and Brazil.[13]

The growth of production and peaking hydrocarbon prices were accompanied by the growth of export earnings from oil. In 2012, oil revenues reached a peak of $69.4 billion, after which, following the collapse of oil prices, they rapidly decreased to a modest $31.2 billion in 2015.[14]

Throughout this period, Angola was a consistent borrower from Chinese banks. The general lending policy between the two countries consists of the issuing of low-interest loans through state banks such as the Export-Import (ExIm) Bank and China Development Bank.

This relationship began in 2003–2004, when the Angolan government signed an agreement for the first loan, backed by crude oil. China's ExIm Bank loaned $4.4 billion at the rate of Libor plus 1.5 percent. Under this agreement, for the debt covered by crude oil, in the first two years China received 15,000 barrels per day, which then decreased to 10,000 barrels per day. When the price of oil fell after the 2008 financial crisis, shipments were increased to 100,000 barrels per day. In 2009, due to a growing budget deficit caused by the fall in oil prices, Angola took out a new loan of $6 billion.

In 2008, China Development Bank provided another $1.5 billion loan for the construction of social housing, transportation infrastructure, and agriculture projects.

China International Fund (CIF), a private bank with influential connections in Beijing, works under a similar scheme, giving cheap loans for the construction of infrastructure, backed by crude oil. CIF provided a total of $9.8 billion to Angola in the 2000s for the building of 215,000 homes in the capital and across seventeen provinces, the creation of an industrial zone in Viana, the construction of a new airport in Luanda, and other projects.

This financing made Angola the biggest recipient of Chinese loans in Africa.[15] Health and education development were also objectives of targeted support. After the war, the Chinese government issued a grant for the construction of the country's largest hospital. Other medical centers and hospitals in the country have undergone partial reconstruction and technical renovation with Chinese funding.

Furthermore, China has become Angola's source for hard-to-obtain medicines. Chinese companies have built, renovated, and modernized universities and schools across Angola, including the country's largest university, the Agostinho Neto University in Luanda.

China has also financed the purchase of agricultural machinery and construction of irrigation systems in the traditional agricultural provinces of Huambo, Huíla, and Moxico.

Between 2007 and 2008, China's imports from Angola more than doubled from $1.2 billion to $2.9 billion, making China the second largest importer of Angolan goods after Portugal. Oil exports in particular began to increase significantly after 2004, just as the first credit line to Angola was granted by China.

In 2007, 26 percent of Angola's crude oil exports went to China. The United States, formerly the main importer of Angolan oil, has been relegated to second place with 24 percent. In 2008, oil exports to China accounted for 72 percent of total trade between the two countries. In 2006 and 2008, Angola was the largest supplier of oil to China, superseding even Saudi Arabia. In 2008, Angola supplied 14 percent of the oil imported by China. This oil-based relationship made Angola one of the few net exporters in its bilateral trade with China since Angola sold $19 billion more in goods than it bought.

With unfettered access to Angola's oil industry, Chinese oil companies have been actively investing in this sector. Sonangol and China's Sinopec formed the joint company Sonangol Sinopec International (SSI), through which in the second half of the 2000s they acquired stakes in a number of existing projects.

Angola's oil wealth has made it possible for the country to attract cheap loans for postwar reconstruction. But the country's economy has not been diversified, and the country's dependence on oil exports only increased over the last fourteen years of peace.

Between 2002 and 2014, crude oil exports as a percentage of total exports remained unchanged at 96 percent. However, the changes that did occur were dramatic increases in absolute numbers. In 2002, $5.7 billion worth of oil was exported, whereas by 2014 almost ten times more oil, valued at $52 billion, left Angola. That same year, the second biggest export was diamonds, accounting for 1.5 percent of exports. Along with oil, iron, aluminum, and copper, raw materials account for 98 to 99 percent of Angola's exports.[16] In other words, there is practically no manufacturing in Angola that competes on the world market.

Due to the lack of sufficient domestic production, most consumer goods are imported and have been for many years—even the most important categories of goods. For example, last year Angola imported food products worth 3.5 billion euros.[17] By the end of the civil war, an average of 54 percent of the

total volume of grain consumed per year was produced abroad. But after ten years of peace, more than half of the grain in Angola was still imported (56.7 percent in 2010–2012).[18] Concerned by the state of agriculture in Angola, the World Bank in the summer of 2016 approved the issuance of a $70 million loan for the development of farms.[19]

Large-scale projects carried out primarily with Chinese loans have not led to an increase in local production, which could have provided building materials, nor did they significantly affect employment rates. Projects funded through ExIm Bank loans had a condition requiring 70 percent of workers to be local hires, though only for the lowest positions that require little or no expertise. Often, however, even on these projects only 30 percent of employees are Angolan nationals.

Political scientist Dr. Lucy Korkin, who interviewed several high-ranking officials and influential businessmen in Angola, paints the following picture. Private Chinese companies often work in conjunction with Chinese state corporations—the recipients of the main investment—and, in exchange for providing them with required services, get a share of the investment. Interviewees also described cases in which state funding was first secured by private Chinese contractors, most often with connections to the state, and then trickled down to small businesses and entrepreneurs from China who offered their services to contractors.

This process allows for the quick formation of a chain, but leaves almost no room for local actors to participate. Chinese companies often displace local producers, with Angolan brick factories swiftly replaced by Chinese machines for making building bricks. As a result, domestic producers are only needed in the event of shortages. This problem has even spread to the supply of food. One Chinese company proudly announced self-sufficiency in supplying food to Chinese workers who cultivated their own vegetables in Angola. It turned out that some of that produce was ending up on the market in Luanda, squeezing out local producers.[20]

So, along with the Chinese loans, a foreign construction sector and accompanying service sector have been imported to Angola. Statistical data on imports indirectly confirm this observation. In 2002, the main importers to Angola were South Africa (17 percent), Portugal (19 percent), and the United States (13 percent). Chinese goods accounted for only a modest 2 percent of total imports. However, by 2005, China's share had doubled, and in 2014 it became the leading importer with 23 percent of total imports, leaving Portugal and South Korea trailing behind with 16 percent and 6.9 percent, respectively.

The role of oil and gas export revenues in ensuring a positive current account balance and financing the purchase of imported products is particularly noticeable when oil prices are falling (see Appendix).[21] During these periods, there is a sharp increase in the negative current account balance: in 2009, it was equal to $7.5 billion (compared with the same positive value the previous year), and in 2014 it was $3.7 billion (compared with a record $13.9 billion positive balance two years earlier).

Accordingly, the government—a major importer of food and fuel—began to take steps to stabilize the budget. In 2014, it initiated a sharp reduction in previously planned government expenditures and deferred payments on domestic debt. While the average public debt was maintained at 35 percent in the period from 2010 to 2013, in 2015 it reached 60 percent. External debt also began to grow due to the drop in value of Angola's currency.

In 2013, the Angolan government developed a plan to solve the problem of oil dependence. The plan was to implement a wide range of measures to increase available capital, reduce bureaucratic pressure on businesses, facilitate access to credit, and create industrial clusters concentrated in the key sectors, including agriculture and food production, resource mining, water and energy infrastructure, hydrocarbon processing, housing construction, and services.[22]

The government proposed using policies that had already been tried in the 2000s to overcome the technical challenges impeding strategic diversification. A significant proportion of these policies focused on fiscal incentives. In 2014, the Commission on the Real Economy, consisting of representatives from various economic departments, expressed the need for a plan for specific investment projects in infrastructure and industry financed through the budget.[23] In other words, this plan offered nothing radically new. During his visit to China, the Angolan Minister of the Economy presented a proposal for cooperation in the implementation of the diversification plans, eliciting a feeling of déjà vu: thirteen years earlier, the Angolan government had attempted the same strategy of Chinese investment projects and partnerships to diversify the economy.[24]

In addition to the original reasons behind the failure of this strategy, the high levels of corruption in Angola greatly reduced the probability of the successful implementation of such a plan. In its annual Corruption Perceptions Index, Transparency International ranks Angola 163rd out of 167 countries surveyed. Angola was followed only by Sudan, Somalia, Afghanistan, and North Korea.[25]

Despite all of these challenges, Angola is also showing positive developments. Fundo Soberano de Angola, the country's sovereign wealth fund set up with oil export revenue, adopted the Santiago Principles—the rules of transparency governing sovereign wealth funds—and has consistently followed them.[26] In 2014, Fundo Soberano de Angola was awarded eight out of ten points on the Linaburg-Maduell sovereign wealth fund transparency index. Additionally, the official auditor of the Fundo is the international company Deloitte, which should further strengthen the fund's transparency.

However, looking at who has been appointed to head the organization once again raises questions about Angola's commitment to transparency and a healthier economy. The Fundo is headed by the eldest son of the president and a businessman from his circle, which together with the president's daughter Isabella at the head of the Sonangol Group—which includes the Sonangol oil company—

gives the president's family unprecedented control over the country's finances. Whether this control will be to the benefit or detriment of the Angolan economy remains to be seen. But the last fourteen years of Angola's development with President dos Santos at the helm can hardly be called successful.

The national development institutes (Angolan Development Bank, National Development Fund, and sometimes Sonangol) annually invested hundreds of millions of dollars into industrial and agricultural projects during the 2000s, but the effectiveness of these investments is in serious doubt. The highly regulated, largely state-owned agricultural sector has soaked up government investment like a sponge while yielding little return.[27] In this respect, the privatization of the country's thirty-three major coffee producers appeared promising. But given that the state holds controlling stakes in more than 200 of Angola's largest energy, water, and transport companies, that on its own is clearly not enough.[28]

AUTHORITARIAN TENDENCIES

Angola claims the status of a regional power, and in recent years has begun to invest more of its oil revenues in the defense industry. The country's internal political situation is fraught with conflict caused by falling government revenues and their reduced distribution. The Angolan regime, as in the past, has resorted to violence to suppress opposition.

President dos Santos has repeatedly insisted that Angola is a regional power rivaling Nigeria and South Africa for influence in sub-Saharan Africa. The Angolan leadership has demonstrated its commitment to this belief with increased defense spending, even amid falling oil prices. In the 2000s, when oil prices were rising, military expenditure was maintained at an average of 4 percent of GDP and, accordingly, increased annually by an average of $285 million through 2012.

In 2013, the defense budget was almost $2 billion more than in the previous year. That same year, Angola bought Russian military aircraft and other weapons worth a total of $1 billion.[29] In 2014, though oil prices were already falling, Angolan defense spending reached a peak of $6.8 billion: more than the defense budget of South Africa.[30] This increases the likelihood of Angola's involvement in regional conflicts. (It is worth recalling that the Angolan government resolved to enter into the Second Congolese War while its own civil war was still ongoing.)

Despite a sizable decline in the defense budget during the past two years, with falling oil prices taking their toll, defense spending in Angola is still more than the total spending on health and education combined. The economic growth of the 2000s, reaching into the double digits, was hardly socially inclusive and therefore should be a cause for concern for the government. Despite the fact that the oil boom led Angola to place fifth among the richest countries in Africa in terms of GDP in 2015,[31] the country also has one of the world's highest rates of infant mortality, with more deaths than war-torn Somalia and Sierra Leone.

The government of Angola lacks accountability to its population, especially to its poorest citizens. Luanda is covered in construction sites, business centers, and government buildings that give the appearance of growth. There are various government-funded social programs through which rent is distributed as aid. But no one knows exactly how much the Angolan government receives and spends. Moreover, when the state does spend money, it is often unclear how much of it reaches its intended destination, or even who that recipient is. The IMF estimates that between 2007 and 2010 the state oil company Sonangol spent about $18.2 billion on unknown purposes.[32] This, of course, raises questions about corruption in the higher echelons of power.

Angolan citizens have repeatedly expressed dissatisfaction with the situation, demanding greater transparency and accountability. President dos Santos has never participated in elections, although formally they were enshrined in the constitution before the parliament (which the president controls) abolished the requirement for the direct election of the head of state several years ago. Under the new rules, the leader of the winning party in parliamentary elections becomes the head of state.

The Angolan regime fears social unrest and therefore allocates part of the rent to the public through social programs. The primary recipients of these funds are war veterans who, when their social payments were delayed in 2012, went over to the disgruntled opposition and participated in anti-government demonstrations.

The Angolan government has actively resorted to repressive measures, both during elections and in their aftermath. Security forces regularly visit the houses of opposition leaders. During one demonstration in Luanda, which was attended by about forty young people, armed police attacked a group of protesters.

A prevalent low standard of living and the country's inability to feed itself, the growing discontent of the population, the use of repressive measures against the opposition, budgetary problems and growing foreign debt, an undeveloped industrial sector, and the urgent need for reform are all the result of Angola's dependence on its resource development.

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Mexico: Successful Industrialization and Residual Dependence

ALEXANDER ZOTIN

In the 1980s, the Mexican economy was heavily dependent on oil production from one supergiant field: Cantarell. However, petrodollars did not solve the country's economic woes, as that period was a time of hyperinflation, devaluation, and economic crisis for the country. Petroleum resource management in Mexico today is carried out by the state-owned company Pemex, which has led to the inefficient development of the industry. Today, the Mexican economy is sufficiently diversified, with hydrocarbons occupying a small proportion of the GDP and the country's net exports. Nevertheless, Mexico's budget is still dependent on oil revenue.

Mexico, located in the southern part of North America, has a population of 127 million people. The population growth rate from 1950 to 2015 was significantly higher than the average of 2.33 percent annually (1.37 percent in 2010–2015) and as compared with the global growth rate of 1.66 percent (1.18 percent in 2010–2015). Mexico's population is quite young, with a median age of 27.4 years, compared to the world average of 29.6 years.[1] The country is ethnically diverse, with 62 percent of the population identifying as Mestizo (of mixed descent), 28 percent as indigenous, and 10 percent as descendants of Europeans. The main religion is Catholicism (82.7 percent), and the main language is Spanish.[2]

Oil was known in Mexico long before Columbus discovered the Americas. The Aztecs and other indigenous peoples called it *chapopote* and used it for medicinal purposes.[3] Industrial oil production began in Mexico in the late-nineteenth century, but what can be described as significant production only began after the turn of the century. President-dictator Porfirio Diaz (1876–1911), welcomed foreign investment, and by the time of the revolution in 1910, the domestic oil companies El Huasteca, Mexican Eagle, Mexican Petroleum Company, and others were already working with U.S., British, and Dutch capital.[4]

After the civil war and revolution of 1917, the country declared all underground resources the property of the nation, under article 27 of the Constitution.[5] Businesses began to gradually withdraw from the country, and in the 1920s, most foreign companies moved to Venezuela, where President Juan Vicente Gomez gave preferential treatment to foreign capital.

Mexico first felt the impact of oil revenues on the economy in the early 1920s, since in 1921 they formed 25 percent of the country's total revenues, and by 1922 that share had grown to 31 percent. However, the subsequent decline in production weakened this dependence. From a peak of 200 million barrels per year in 1921—second in the world after the United States and accounting for a quarter of global production—production had fallen to 50 million barrels per year by 1937, and Mexico had dropped to the ranking of the sixth largest oil producer in the world.[6]

In 1938, Mexican President Lazaro Cardenas, with the support of a months-long strike by the oil workers' union,[7] nationalized the country's oil industry. Every year on March 18, this event is still celebrated as a national holiday. In June of the same year, the national oil company Pemex was created to absorb the assets of foreign companies operating in Mexico. In 1958, Pemex's status was enshrined in a special law severely limiting the role of foreign and private companies and contractors in the oil industry. As a result, in the 1950 and 1960s, Mexico became a net importer of oil, as domestic production did not rise above 90 million barrels per year (250,000 barrels per day).

"SAVIOR OF THE NATION"

The country's dependence on revenue from oil production began in the 1970s, when large deposits were discovered in the Gulf of Mexico and the world saw its first oil crisis in 1973 due to the OPEC oil embargo, which caused oil prices to rise sharply. A key event was the discovery of the giant Cantarell oil field by fisherman Rudesino Cantarell Jimenez, who drew attention to the spots of oil in the sea in 1971.

The first oil from Cantarell was extracted in June 1979, but production levels only reached 4,000 barrels per day. In subsequent years, the field became one of the largest production areas in the world, reaching 700,000 barrels per day in 1980 and 1 million barrels per day by 2000. As a result, this one supergiant field provided about 40 percent of Mexico's total oil production in the 1980 and 1990s, and up to 60 percent in the mid-2000s. The total proven oil reserves leaped from 6.3 billion barrels at the end of 1976 to 16 billion in 1977, and finally to 40 billion in 1978, when specialists assessed the size of Cantarell.[8]

Oil exports increased 23-fold from 1975 to 1981 as production increased from 700,000 barrels per day in 1974 to 2.7 million in 1982, while the price of oil rose from $8.80 per barrel in 1973 to $38.2 dollars per barrel in 1981.

In the 1980s, Cantarell was nicknamed "the savior of the country" (el Salvador del Pais) and its crude led to high hopes beyond Mexico. In the neighboring United States, oil production reached a peak in the 1970s and had begun to decline by the 1980s. The unstable situation in the Middle East also

made the problem of energy security an urgent issue, and Mexico became a strategically important supplier of oil outside the OPEC cartel.

Many U.S. refineries restructured their capacity to refine Mexico's dominant Maya crude, which had a characteristically high density and high sulfur content. Now that the United States has increased its own domestic production of light and low-sulfur shale oil, a crude oil swap is carried out between the two countries because American refineries have a capacity to perform desulphurization that is missing in Mexico.[9]

Under President José López Portillo (1976–1982), 86 percent of Mexico's oil exports went to its northern neighbor, though Mexican oil only accounted for 10 percent of total oil imports into the United States.[10] This imbalance was allowed to occur despite the fact that Mexico's first energy plan stipulated that no more than 50 percent of Mexico's total oil exports should be sent to any one country.

During the second energy boom (1978–1981), non-oil-based economic ties increased between the United States and Mexico. U.S. companies launched the first wave of what later came to be known as outsourcing, setting up various assembly plants, mainly for cars, known as maquiladoras.

The history of maquiladoras began in 1964 with the end of the Bracero program, under which workers from Mexico were legally allowed to work in the United States on a seasonal basis. To prevent crippling unemployment in the regions bordering the States (Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas), after the program ended the Mexican authorities adopted the Programa de Industrialización Fronteriza (PIF) of cross-border development, which nullified customs duties on the import of equipment for factories and the export of finished products.

In 1971 the program was expanded to all of Mexico's states. In 1965, there were twelve maquiladoras in Mexico, but by 2006 their number had increased to 2,810. In 1985, export revenues from maquiladoras exceeded export earnings from oil, and by the end of the century, the maquiladora industry accounted for 25 percent of Mexico's GDP and 17 percent of the country's total employment.[11]

During the 1980s, the dependence of Mexico's budget on oil revenues increased sharply. In 1976, oil revenues accounted for only 5 percent of the budget. In 1980 this figure increased to 24 percent and by 1987 it reached a peak of 40.4 percent.[12] Against the background of a sharp rise in oil exports, with a 19 percent annual average between 1977 and 1981, Mexico's GDP experienced an average growth rate of 9 percent per annum in the same period.

However, the abundance of oil revenues did not lead to real economic development. Chronic economic problems, including high levels of inequality, weak development of industry, and a lack of investment in human capital, were simply offset by higher but inefficient government spending. The Mexican peso strengthened in real terms against the dollar, reducing the competitiveness of local products.

Domestic prices of basic commodities, including energy, were regulated by the state in Mexico as they were in many developing countries around the world at the time, meaning they were grossly undervalued. The government kept them at a fixed level during the oil boom period, despite high inflation. Fuel prices were significantly lower than their real value, which led to a waste of fuel, on the one hand, and the formation of an uncompetitive market dependent on artificially reduced energy prices, on the other.[13]

The state, however, continued to increase the national debt, in spite of the already heavy burden from debt accrued in the early 1970s. Relying on oil revenues, the government failed to establish effective mechanisms of taxation, and tax revenues accounted for only 9.9 percent of GDP in 1970, significantly less than the world average.[14]

Extremely low income and corporate income tax, inherited from the oil boom, remain key features of the Mexican economy. While lower taxes can stimulate business in a country, given the high levels of inequality (a Gini coefficient of 0.48), inefficient taxation has hindered the fight against poverty and created a budgetary dependence on oil-related sources of income in Mexico.[15]

A LOST DECADE

The state monopoly on resources did not prove conducive to efficiency, and Pemex was discovered to be hugely wasteful, with payments made to "dead souls," opaque contracts drawn up with shady contractors, and corrupt schemes to withdraw money through the oil workers' union. Diaz Cerrado, the head of Pemex from 1976 to 1982,[16] was eventually jailed on corruption charges. During the years of the oil boom Pemex's debt increased tenfold, from $2.5 billion in 1976 to $25.2 billion in 1982.

The 1980s were a crisis decade: the result of high expectations and embezzlement following the short era of the oil boom. In Mexico it is known as the "decada perdida," the lost decade. In 1982, oil prices fell sharply, and the shock of the balance of payments necessitated the devaluation of the peso. Compounding this were issues relating to the debt-burdened Pemex. The outflow of capital from the country, coupled with fears among investors about the solvency of the state, aggravated the situation.

At first, President Portillo attempted to resist these challenges. In August 1982, he nationalized all the banks and announced that he would "defend the peso like a dog."[17] By this time, Mexico had defaulted on its foreign debts. The new president, Miguel de la Madrid, who took office at the end of 1982, sharply reduced government spending, decreased import tariffs, and launched a privatization process. But he was unable to solve the macroeconomic issues: the average inflation rate in 1980 was 100 percent, and by 1987 it had reached a peak of 159 percent. Unemployment rose to 25 percent. Inflation was only stabilized by the end of the 1980s, and the peso was pegged to the dollar starting in 1988.[18]

The 1990s marked the beginning of a new crisis. During the presidential campaign of 1994, President Carlos Salinas began the traditional practice of increasing government spending, and the budget deficit reached 7 percent of GDP. The Treasury Department was told to issue government bonds denominated in dollars (tesobonos), which were in demand by foreign investors, as they were immune to currency fluctuation risks. With U.S. investors buying new government bonds, confidence in the Mexican economy grew, particularly after the North American Free Trade Agreement (NAFTA) entered into force on January 1, 1994.

However, several subsequent events shook investor confidence. The candidate for the ruling Institutional Revolutionary Party was murdered in Tijuana in March 1994, at the same time as a rebellion broke out among the indigenous peoples in Chiapas. The cause of the revolt was that in 1992, as a condition for the signing of the NAFTA agreement, Mexico had to change the constitution to allow the privatization of communal lands. This undermined the basic protection of the rights of indigenous communities to their land. After NAFTA entered into force, discontent within the indigenous communities grew into a revolt led by the leftist Ejército Zapatista de Liberación Nacional (Zapatista Army of National Liberation, or EZLN).

Capital outflow began again, the fixed peso was once again revalued against the dollar, and by December 1994, foreign exchange reserves were depleted. On December 20, the new president, Ernesto Zedillo, announced the devaluation of the peso by 13 to15 percent. After that, investors rushed to sell assets denominated in pesos and tesobonos, fearing the default of Mexico, which resulted in the devaluation of the peso by 50 percent after the introduction of the floating exchange rate.

The panic over Mexico spread to other markets in emerging economies, triggering a global financial crisis known as the Tequila Crisis.[19] Public debt due to the effect of devaluation increased from 20 percent of the GDP in 1993 to 35 percent in 1995.[20] That same year, Mexico received assistance from the International Monetary Fund and the United States; however, the economy did not begin to grow again until the end of the 1990s. Low oil prices during this period reduced economic dependence on oil revenues. In 1980, oil exports accounted for 61.6 percent of total exports, while by 2000 that figure was only 7.3 percent.

STABILIZATION AND INDUSTRIALIZATION

As a consequence of the 1990s economic crisis, in the 2000s Mexico scrapped its established political system. The Mexican political system from 1929 to 2000 was based on the dominance of the Institutional Revolutionary Party (PRI), which had no real competition at all levels of government since other parties were marginalized and the PRI incorporated all of Mexico's political elite. However, the PRI was not so much the ruling party as it was the president's party. It was de facto controlled by the sitting president, who then appointed his supporters to positions of power.

In 1938, at the suggestion of President Cardenas, the PRI was divided into four "class" groups: industrial workers, peasants, a middle-class sector that included government officials, and the military (this last group was later abolished). As a consequence, internal ideology within the PRI was quite eclectic.

This created a corporatist mechanism of representation that incorporated different social groups (in the 1980s, party members made up about 10 percent of the population), providing organizational unity for the Mexican elite. However, the impact of the PRI on the political agenda was indirect. The key role was played by the government and influential groups such as business leaders and traditionally powerful trade unions.

Successive presidents formed a ministerial cabinet every six years, relying in part on the technocrats and in part on their own personal political clientele. At the end of their presidential terms, they picked their successors, usually from among their ministers. Opposition candidates had no chance, and the new president became a politician who at the end of his tenure would handpick his successor.[21]

As a result of the economic troubles of the 1990s, the PRI lost its majority in both houses of parliament for the first time in the 1997 election. In 2000, the PRI candidate lost the presidential election in another first, and the party became the opposition. For two terms, the office of president was held by representatives of the right-wing conservative Catholic National Action Party (Partido Acción Nacional), first Vicente Fox (2000–2006) and then his successor Felipe Calderón (2006–2012).

Although attempts by Fox and Calderon to carry out mass privatization and relax energy legislation to allow foreign investors into the oil sector failed due to resistance in parliament, they managed to shatter the dominance of the one-party system. In 2012, the PRI candidate Enrique Peña Nieto won the presidential election.

The early 2000s were not good for the Mexican economy. During this period, U.S. investors discovered China, and factories began to be moved to China to the detriment of the Mexican maquiladoras (there is no distinction between maquiladoras and simple offshore factories under NAFTA, but the traditional term remains). After signing NAFTA, Mexico's share in the market of industrial imports of U.S. goods rose from a level slightly higher than 7 percent in 1994 to almost 13 percent in 2001.

Mexico's position, however, changed dramatically after China joined the World Trade Organization (WTO) in 2001. In the period from 2001 to 2005, the export of Chinese manufactured goods to the United States grew by an average of 24 percent per year while Mexico's export growth slowed sharply from around 20 percent to 3 percent, on average, per year during the same period. China was able to displace Mexican exports to the U.S. market because Mexico had lost its advantage in the few labor-intensive manufacturing industries in which it had prevailed, including textiles, office equipment, furniture, and photographic and optical equipment.

In 2004, wages in China were on average $0.72 per hour including taxes and social security, while in Mexico they were $2.96. For comparison, in California, hourly wages were $20.84. From 2000, the maquiladora industry began to see declining investor interest, and in 2002 alone, 529 factories were closed. In total, from 2000 to 2004, about a third of the maquiladoras operating in Mexico closed and 150,000 people lost their jobs.[22]

However, around 2005, there was a slowdown in this negative trend. Having fallen to 11 percent, the share of imports to the United States from Mexico began to grow in 2005 and now stands at around 15 percent. Mexico first squeezed out competitors such as Japan and Canada, and in recent years has increased its market share at the expense of China. From 2005 to 2010, both Mexico and China increased their share in the U.S. market. After 2010, however, the growth of Mexico's share of the U.S. import market coincided with the decline of China's share.

This shift in favor of Mexico occurred mainly due to an increase in Mexican exports of electronics, telecommunications technology, and transport equipment. The Mexican share of imports of automobiles and auto parts to the United States increased from 2005 to 2010 by 10 percentage points, and Mexico now accounts for one-fifth of total U.S. imports of these goods. It is the second largest foreign supplier after Canada. In 2015, 3.6 million vehicles (seventh largest producer in the world)[23] were made in Mexico, compared with 1.9 million in 2000 (when Mexico was the ninth largest producer in the world).[24]

This success is primarily due to two factors: the logistical advantages in trading with the United States, which includes no maritime transport expenses—a crucial factor in the trade of bulky and heavy goods—and a gradual rise in the price of labor in China, which made Mexican goods more competitive. Wages in the manufacturing industry in China have increased by 14 percent per year on average since 2003, when measured in renminbi, and by almost 20 percent per year in dollars, reflecting the growth in nominal wages and the revaluation of the Chinese currency.

The average wages in the Mexican manufacturing industry have remained fairly constant in dollars. Any moderate increase in wages is due to the depreciation of the peso. As a result, the growth of wages in China and the value of the renminbi almost doubling against the Mexican peso in the last decade (from 0.72 to 1.0 peso in 2006 to 0.32 to 1.0 peso in 2016) meant that the average wage in the country was lower than in China, which had a favorable effect on the competitiveness of the maquiladora sector in Mexico.

As a result, about one-third of Mexican exports are now produced at 3,000 maquiladoras, which include major global manufacturers of automobiles and electronics. This brings in more than three times the amount of export earnings from oil. The main destination for Mexican exports is the United States ($291 billion in 2014), followed with a wide margin by Canada ($24.5 billion) and China ($7.89 billion).[25]

Rising oil prices in the mid-2000s again increased the budget's dependence on oil revenues, peaking at 38 percent of the budget in 2006. During this same period, Mexico managed to achieve macroeconomic stabilization, completely control inflation, reduce the budget deficit, and attract foreign investment. However, many of the economy's structural problems remained, with a high proportion of informal businesses accounting for up to 60 percent of total employment, monopolization of key sectors (such as Pemex), a high level of inequality, and the low quality of human resources.[26]

The impact of high oil prices from 2000 to 2010 was partly offset by falling extraction levels. Production of oil and gas condensate dropped from a 2004 peak of 3.8 million barrels per day to 2.6 million barrels per day in 2015, the lowest level since 1981.[27] The level of domestic consumption rose to 1.9 million barrels per day in 2015 from 1.3 million barrels per day in 1980.

In 2013, Mexico passed constitutional reforms changing the status of Pemex. Now the oil and gas industry can attract foreign companies and investment. By 2016, only a few auctions had been held for the rights to develop Mexican oil fields, though one was won by Italy's ENI.[28]

The share of oil revenue as a proportion of Mexico's GDP was 4.9 percent in 2014, compared to the world average of 2.5 percent. At its peak in 1982, this proportion had reached 18.5 percent.[29] The 2014 figure is more than twice the proportion of GDP from remittances from migrant workers working outside of Mexico, almost exclusively in the United States. According to the World Bank, remittances from the United States, which since 1979 had accounted for an annual average of 1.5 percent of GDP, in 2015 amounted to 2.3 percent. Nevertheless, the role of migrant workers in Mexico's economy is not as great as in neighboring Central American countries such as El Salvador, where economic growth is largely determined by remittances.[30]

When oil prices fell in 2015 the proportion of the budget that came from oil revenues dropped to 19 percent; however, relative to the small proportion of oil exports (9.2 percent in 2014), it is still a lot. This suggests that Mexico is still a rent-dependent state in which the reliance on oil revenues manifests itself in fiscal issues—namely, in the inability of the state to collect taxes. Despite this, the non-governmental sphere of the economy has demonstrated sufficient stability. In 2015, GDP grew by 2.5 percent, and the IMF forecast 2.1 percent growth in 2016.

Mexico traditionally maintains a current account deficit. However, after a sharp outflow of capital in 1994, the high current account deficit—which in the early 1990s reached 6 percent of GDP—has in recent years become a relatively moderate 1 to 2 percent of GDP. This level is unlikely to pose any danger in terms of a reversal in the flow of investment. As the IMF economists Atish Ghosh and Uma Ramakrishnan have noted, for developing countries that lack capital and have more investment opportunities than they can afford to use, given the low level of internal savings, a deficit in the current account can be quite natural.

In addition, Mexico has traditionally had a quite high budget deficit (4 percent of GDP in 2014 and 3.5 percent in 2015), which, in the end, through the mechanism of debt financing, results in a level of general government gross debt that is fairly high for a developing country: 56 percent of GDP. Nevertheless, interest payments are relatively low because of the low interest rates in developed markets. According to IMF forecasts, debt will be reduced steadily in the coming years.[31]

On one hand, Mexico is currently not heavily dependent on petrodollars. However, the dependence of the budget on oil revenues remains high. The problem lies in the small volume of the budget relative to GDP and in the state's inability to create an effective taxation system. In this respect, Mexico has not yet fully rid itself of its oil dependence and, at least in the sphere of public finances, continues to be a rent-based state.

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Azerbaijan: A Thirty-Year Fairy Tale

ALEXANDER ZOTIN

One mega oil field led to Azerbaijan's prosperity at the beginning of the twenty-first century. In the 2000s, its economy grew at the highest rate in the post-Soviet space. However, in the coming years, the country is likely to face a serious drop in oil production, and Azerbaijan is not ready for this crisis. Oil revenues are currently spent mainly on consumption, while the non-oil economy remains weak.

The population of Azerbaijan, located in the eastern part of the Caucasus on the Caspian Sea, is 9.8 million people. Its population growth between 1950 and 2015 was slightly above the world average at 1.87 percent on average per year (1.39 percent between 2010-2015) compared with the average annual global growth rate of 1.66 percent (1.18 percent between 2010-2015). Azerbaijan's population is slightly older than the global average with a median age of 30.9 years, while the world average is 29.6 years.[1] The country is ethnically predominantly Azerbaijani (91.6 percent), with only 2 percent Lezgin, 1.3 percent Russian, 1.3 percent Armenian (predominantly in Nagorno-Karabakh, which has de facto seceded from Azerbaijan), and 1.3 percent Talysh. The dominant religion is Islam (96.9 percent), with a Shia majority, and the main spoken language is Azerbaijani.

Oil has been produced on the territory of modern Azerbaijan for several thousand years, initially mainly for medicinal purposes. Industrial production of oil started in the late nineteenth century with the Nobel brothers' Petroleum Production Company, the Rothschild-founded Caspian and Black Sea Oil Industry and Trade Society, and Royal Dutch Shell.[2] The main sites of production and refining were the capital Baku and the Apsheron Peninsula.

The first drilling boom occurred in the early twentieth century. By 1905, oil production had grown to 200,000 barrels per day, accounting for half of the world's production at the time. That same year, after the 1905 Russian Revolution, production declined; by the early 1920s, following the 1917 Russian Revolution, production had fallen fourfold.

Between 1920 and the Soviet Union's entry into World War II in 1941, there was a renaissance in Azerbaijani production. By 1941, extraction had reached a new peak of 500,000 barrels per day. During the war, production again fell sharply to 200,000 barrels per day and, in the postwar years, recovered very slowly, reaching 400,000 barrels per day at the end of the 1960s. After that,

production decreased gradually, dropping to 200,000 barrels per day by the end of the 1990s.[3] Only in the 2000s did Azerbaijan reach a new peak of production.

In the first few years after declaring independence in 1991, Azerbaijan was at war with Armenia for control of the disputed territory of Nagorno-Karabakh. Failures at the front led to political instability. Two presidents, Ayaz Mutalibov and Abulfaz Elchibey, were replaced in two years. After an army rebellion in the city of Ganje in June 1993, Elchibey handed over power to the former first secretary of the Communist Party of Azerbaijan, Heydar Aliyev. In October 1993, Aliyev was elected president, and by May 1994, he had managed to stabilize the political situation in the country by signing a ceasefire agreement with the Nagorno-Karabakh Armenians and Armenia.

CONTRACT OF THE CENTURY

In September of the same year, Azerbaijan's government signed the "Contract of the Century" on the joint development of three oil fields: Azeri, Chirag, and Guneshli (collectively referred to as ACG) in the Azerbaijani part of the Caspian Sea, 120 kilometers from the coast. These fields were opened in 1981–1987. The production-sharing agreement (PSA) valid through 2024 was signed by BP and Ramco of the United Kingdom; the U.S. companies Amoco, Unocal, Exxon, McDermott, and Pennzoil; Russia's Lukoil; Norway's Statoil; Japan's Itochu; Turkey's TPAO; Saudi Arabia's Delta Nimir; and Azerbaijan's state oil company SOCAR.[4] Together they formed the Azerbaijani International Operating Company (AIOC) consortium, whose composition has changed slightly over time. The main shareholder is currently BP.

The rapid development of offshore fields by the AIOC consortium led to a sharp increase in oil production in the late 1990s. Oil from the Chirag field started being produced first in 1997, making it possible to increase production to 300,000 barrels per day in 2005. That same year, the first oil was extracted from the Azeri field, and in 2008 from the deep-water Guneshli field. As a result, by 2010 the production of oil and gas condensate in Azerbaijan reached a record one million barrels per day, with three-quarters of production coming from the ACG block.[5]

At the same time, the production of natural gas increased rapidly from the beginning of the development of the Shah Deniz field in 2006 as a result of a PSA with a consortium of international oil companies, of which again the main shareholder is BP.[6] Production increased from 5.2 billion cubic meters in 2005 to 18.2 billion cubic meters in 2015.[7] Since 2007, Azerbaijan has been a net exporter of gas, with 9.8 billion cubic meters of gas consumed by the domestic market.

New pipelines were built for transporting oil and gas as part of the PSAs, including the Baku-Supsa (1999) and Baku-Tbilisi-Ceyhan (2006) oil pipelines, and the Baku-Tbilisi-Erzurum (2006) gas pipeline, as well as several other oil and gas pipelines with less capacity.

Between 2000 and 2010, Azerbaijan tried to become a transit country for Central Asian and Middle Eastern gas being transported to Europe. In accordance with the EU's regional strategic document, which was adopted in June 2017 to assist Central Asian countries over the period 2007–2013,[8] the diversification of fuel supplies was declared to be one of the main objectives of EU foreign policy.[9]

The Southern Corridor plan designed to realize this goal envisages several pipelines, but has been scaled back over the years. The main route was initially planned to be the so-called Nabucco pipeline from Erzurum in Turkey to the Austrian city of Baumgarten an der March. The Azerbaijani offshore field Shah Deniz, developed by BP, was planned as a major source of gas for this pipeline to ensure the commercial viability of the project. The first phase of the project is already in operation and currently supplies 8.4 billion cubic meters (bcm) a year to Georgia, Turkey, and Greece through the South Caucasus Baku-Erzurum gas pipeline, which runs parallel to the more famous Baku-Tbilisi-Ceyhan route.[10]

However, Nabucco needed auxiliary sources in order to justify its existence and these did not materialize. There are two different regional groups of suppliers: the Greater Middle East and Central Asia, each of which is problematic.[11] Shipments from Iran were impossible until recently due to sanctions, and would bypass Azerbaijan in any case. Central Asian gas could be transported along the seabed of the Caspian Sea and through Azerbaijan. The largest reserves and prospects are in Turkmenistan.[12]

The exact volume of gas reserves in Turkmenistan is unknown—although BP estimated them to be 17.5 trillion cubic meters in 2015, or sixteen times greater than Azerbaijan.[13]

However, this figure is not confirmed as the country refuses to join the Extractive Industries Transparency Initiative (EITI).[14] This lack of security for natural gas supplies from Turkmenistan was one reason that prompted the Austrian gas company OMV Gas GmbH, which heads the consortium for the construction of the Nabucco pipeline from Turkmenistan and Azerbaijan to the EU, to cancel the project in June 2013.

In March 2017, Azerbaijan itself withdrew from EITI, after it failed to address EITI concerns about civil society freedoms in the country. That jeopardizes current and future financing even for the current Southern Corridor, not to mention the possible extension to Central Asia.[15]

Other concerns included opposition from Russia (for example, in 2008 when there was a conflict between Russia and Georgia, there was anecdotal evidence that some bombs were hitting places not far from the Baku-Tbilisi-Ceyhan pipeline, a clear hint about possible vulnerability of trans-Caspian transit), legal disputes over the status of the Caspian Sea, and big Chinese investment in Turkmen gas.

Azerbaijan's gas export plans are now focused on the projected Trans-Anatolian Natural Gas Pipeline and the Trans-Adriatic Pipeline (TAP), on which construction has started. TAP will run through Turkey to Greece and Italy. The declared plan is that from 2019, Azerbaijan will ship Turkey 10 bcm of gas from its Shah Deniz II gas field. From 2020, the plan is that a further 6 bcm will go to the Balkans, Greece, and Italy. Azerbaijan will thus be supplying around 2 percent of the EU's gas needs, a small but not insignificant amount.

Turkey is the main transit country and strategic partner of Azerbaijan. The two countries share close historical and linguistic ties and Turkey was the first country to recognize Azerbaijan in 1991. The two leaders today, Ilham Aliyev and Recep Tayyip Erdoğan, enjoy a close relationship, and there is a strong economic relationship. Azerbaijan's state oil company SOCAR has invested $18 billion in the Turkish economy. The Turkish company Türkiye Petrolleri Anonim Ortaklığı (TPAO) acquired a 6.75 percent share in the development of the ACG field and a 9 percent share in the Shah Deniz field. Turkish goods account for $2.4 billion out of a total $13.9 billion of Azerbaijani imports. (The second largest importer is Russia, with $2.1 billion worth of imports annually.)

THE OIL BOOM

The sharp rise in oil and gas production in Azerbaijan coincided with an increase in hydrocarbon prices. In 1991, Brent crude was worth $38.2 a barrel, while in 2010 it had risen to $86.4 a barrel.[16] The combination of a low starting base from the 1990s, the growth of production, and high hydrocarbon prices led to spectacular GDP growth rates. While in the 1990s, average annual GDP growth was negative, by the 2000s the annual average was 14.6 percent, exceeding 20 percent in some years (26.4 percent in 2005, 34.5 percent in 2006, and 25 percent in 2007, according to IMF data).[17]

Azerbaijan's non-oil GDP also grew, but its growth rate did not exceed 15 percent of GDP per year. The growth of non-oil GDP was dominated by government investment, primarily in the construction sector. Very high growth rates are a rarity in economic history, although some oil-producing countries, especially small ones, have occasionally demonstrated a similar trend. From 1992 to 2014, Azerbaijan's GDP in current dollars rose from $1.2 billion to $75.3 billion (a record among the former Soviet republics), and the GDP per capita increased from $159 in 1992 to $8,000 in 2014, of which $2,300 per capita came from net exports of oil and gas.

High GDP growth rates coincided with high export growth rates. In the 2000s, the annual exports average grew by 18.8 percent, with oil and gas accounting for 93 percent of exports (in Russia, for comparison, when hydrocarbon prices were at their highest in 2013–2014, oil and gas did not exceed 70 percent of overall exports).[18] The proportion of oil and gas exports as a percentage of GDP was 30 percent in 2014, compared to 17 percent in Russia and 1.3 percent in Mexico. Net exports do not

take into account factors such as production for domestic consumption, activities of oilfield service companies, oil and gas transportation, and the service sector associated with oil and gas, so the real share of the oil and gas sector as a percentage of the overall GDP is higher than just the percentage of net oil and gas exports. In 2007, the proportion of the oil and gas sector in the overall GDP of Azerbaijan was more than 50 percent, according to the IMF.[19]

The dependence of Azerbaijan's budget on oil and gas revenues increased dramatically during the boom years. If in 2003–2007, transfers from the State Oil Fund to the budget comprised, on average, 10 percent of GDP annually, in 2010–2014 they exceeded 50 percent of GDP, and in 2014 reached 58.2 percent. Taking into account the other budget revenue related to the oil and gas sector[20]—mainly income taxes from oil and gas companies such as SOCAR—oil and gas revenues accounted for 72 percent of the budget in 2013. By comparison, in Russia in the late 2000s to the early 2010s, this figure was about 30 percent, while in Iraq, Kuwait, Libya, Oman, Guinea, and Brunei, oil and gas revenues made up about 90 to 95 percent of the budget.

Throughout the oil boom period, the proportion of the budget stemming from GDP grew from 18 percent of GDP in 1994 to 46 percent of GDP in 2010.[21] The non-oil budget deficit reached 53.8 percent of the non-oil GDP in 2013. After a drop in oil prices in 2015 it fell to 32 percent.[22]

The country's successes in the 2000s and early 2010s were primarily due to the success of ACG. The consortium invested $28.7 billion in the development of ACG, while it took in revenue of $73 billion. Azerbaijan's revenues from the PSA for ACG were also large. From 2001 to 2015, the State Oil Fund received $124.9 billion.[23]

In 2003, Heydar Aliyev, who was in poor health and was to die before the end of the year, handed on the succession to his son, who was the first vice president of SOCAR. Ilham Aliyev was appointed prime minister and then won the presidential election on October 15, 2003, officially receiving 79.5 percent of the vote. The opposition did not recognize the election results, but protests organized by the Musavat party were suppressed.

The younger Aliyev kept most of the old elite that had surrounded his father, but gradually asserted more personal control over the country. He was reelected president in 2008, in an election that was not judged to be free and fair by international observers. In March 2009, Azerbaijan held a referendum on amending the constitution to abolish presidential term limits. In the following elections in 2013, Ilham Aliyev was elected president for the third time, and in September 2016 the country held a referendum on extending the presidential term from five to seven years, which was passed with the support of 80 percent of voters.

In February 2017 Aliyev made his wife Mehriban Aliyeva (of influential Pashaev family) the first vice-president of the country. Some observers notice that Aliyev needs support from dominant clans

like Pashaev, because the Aliyev family is historically not so influential (some researchers even say that Aliyevs have Kurdish origin[24]).

Aliyev does not only control the country's politics. In 2012, the Organized Crime and Corruption Reporting Project (OCCRP) named Ilham Aliyev "corrupt figure of the year." According to the OCCRP, there is a lot of "well-documented evidence" that over the years the ruling family has systematically seized stakes in Azerbaijan's most profitable businesses.

DOUBLE IMPACT: PRICES AND PRODUCTION

In addition to the peaceful political transition, production growth allowed Azerbaijan to weather the crisis of 2009, when GDP growth remained high, at 9.4 percent. However, after production peaked in 2010, it was followed by a fairly significant decline. By 2015, according to BP, production had dropped to 850,000 barrels per day.[25] This was followed by another blow, when falling oil prices forced the government to devalue the manat, Azerbaijan's national currency.

In December 2006, amid a huge influx of petrodollars, the government had allowed the manat to strengthen, reducing the currency exchange rate from 0.92 manat to the dollar to 0.87 manat. Over the next few years, the manat gradually strengthened against the dollar. In June 2011, the Central Bank of Azerbaijan became wary of excessive strengthening of the manat and the exchange rate was fixed at 0.78 to the dollar. After a sharp drop in oil prices in February 2015, the government carried out a devaluation of the manat, fixing it at 1.05 to the dollar.

Capital outflows continued, reaching a peak of $15 billion in mid-2014, and the Central Bank's gold reserves fell to $5 billion in December 2015. This led authorities to devalue the manat again to 1.55 to the dollar in December 2015, after which they allowed the currency to return to a free-floating state. The exchange rate of the manat is currently 1.6 to the dollar. The devaluation of the manat was more substantial than that of other currencies of countries that are part of the Commonwealth of Independent States and dependent on oil and gas exports—namely, the Kazakhstani tenge and the Russian ruble.

Successive devaluations meant that in January 2017, the manat had declined by 57 percent against the dollar since the slump in oil prices.[26]

Azerbaijan's GDP growth fell in 2015 to 1.1 percent, and the IMF forecast that Azerbaijan would experience its first year of recession in the last twenty years for 2016, with GDP shrinking by 2.4 percent. The current account, according to the IMF, remains just about positive, although until 2015, thanks to a high trade surplus, the current account surplus was double-digit.

The end of Azerbaijan's oil boom has already had marked effects on society. Poorer Azerbaijanis are hurt by a combination of price-rises on imported food and systemic long-term unemployment. The

urban middle classes have also suffered. The devaluation of the manat has driven many of them into debt after they took out dollar-denominated loans and real-estate prices crashed. Several banks have shut down.

The real test for Azerbaijan, however, is still ahead. The consortium contract to develop the ACG is set to end in 2024, and no new major deposits have been found in Azerbaijan, despite the fact that exploration in the country has been quite active throughout the boom. According to some forecasts, in 2025 oil production may more than halve.[27] Even if these forecasts turn out to be overly pessimistic, Azerbaijan should still expect to experience a further production decrease.

The fall in oil production will stem the flow of petrodollars to Azerbaijan. Previous levels of expenditures can in part be supported via the State Oil Fund, which on October 1, 2016 amounted to $35.8 billion.[28] However, these reserves are not unlimited, especially given the high dependence of the budget on transfers from the fund and the increased level of public debt in recent years, from 12 percent of GDP in 2010 to 36 percent of GDP in 2015.

AN UNHEEDED WARNING

Only 27 percent of the proceeds from the sale of oil and gas since 2003 were directed to the reserves of the State Oil Fund (SPF). The remaining 73 percent went to the budget and was accordingly spent on current requirements. Substantial savings of oil and gas rents were made only in the fund's first few years, but since 2009 the proportion of proceeds being transferred directly into the budget for expenditures exceeded 90 percent of what was directed into the fund (88 percent in 2015).[29]

The future problems that Azerbaijan can expect to face due to the exhaustion of the ACG oil fields have been well known to economists for years. Back in 2004, the IMF released a report entitled "Managing Oil Wealth: The Case of Azerbaijan." IMF economists warned the government of the short-term nature of oil and gas rents and of the need to adapt a fiscal policy to prepare for a sharp decrease in income after 2024.[30]

Furthermore, the hefty transfers to the budget from the fund since 2008 consistently violated the long-term oil and gas revenue management strategy for 2005–2025 adopted by presidential decree in September 2004. This decree stated that when incomes from oil and gas revenues peak, at least 25 percent of them should be saved.[31]

The reasons this is being allowed to happen are clear. The parliament does not supervise the activities of the SPF, and civil society has no control over it.[32] Failure to observe the 25 percent of peak revenues rule will inevitably lead to a situation in which the government, in order to maintain the level of spending amid reduced production and/or a fall in oil prices, will be forced to either spend the whole SPF or have a high budget deficit, or both. This situation would make the whole of public finances

unstable and lead to a debt crisis or a sharp decline in living standards, probably as early as in the mid-2020s.[33]

The authorities are constantly proclaiming the need to diversify the economy. At the World Economic Forum in Davos in 2012, Aliyev noted that revenues derived from the oil sector create opportunities to diversify the economy and said that this was a key priority for state policy. In 2014, Azerbaijan adopted a state program for the development of industry in 2015–2020 and a development plan titled "Azerbaijan 2020: Look into the Future."[34]

The program for the development of industry points to the importance of exports: "Regardless of the size of the domestic market, the development of industry requires a shift from an import substitution approach to an export-oriented production model. One reason . . . is that in small economies, the volume of a product calculated for the domestic market does not make it possible to reduce production costs, and secondly, it is impossible to ensure high growth rates in domestic demand over a long period of time."[35]

The non-oil sector of the economy in Azerbaijan is weak. In 2014, manufacturing accounted for 11.2 percent of total industrial production—less than 10 percent if the petrochemical industry is excluded. In 2005, its share had been 17.2 percent. Mechanical engineering accounted for 2.8 percent, compared with 4.9 percent in 2005; light industry was 0.6 percent compared with 1.2 percent in 2005; and food production was 2.4 percent compared with 3.3 percent in 2005.[36]

Jobs in Azerbaijan are concentrated mainly in the manufacturing sector, in which 101,500 people work, compared with 24,000 in the oil and gas industry. (SOCAR employs about 60,000 people, but this number takes into account overseas offices in Georgia, Turkey, Romania, Kazakhstan, Austria, the United Kingdom, and Switzerland, and trading subsidiaries in Switzerland, Singapore, Vietnam, and Nigeria, as well as non-core assets.)[37]

Large enterprises in the non-oil sector include factories producing tractors and agricultural machinery, cars, electronics, solar panels, metals, and ceramic tiles.[38]

Declarations about developing the non-oil export sector so far remain just that, and little more. Besides oil and gas, Azerbaijan exports hardly anything. Out of $11.4 billion of exports in 2015, non-oil exports accounted for only about $1 billion, which mostly consisted of agricultural products with low added value.[39]

A major role in the economy is played by remittances from migrant workers working outside of Azerbaijan, mostly in Russia. According to the World Bank, in 2015 they made up 2.4 percent of GDP, compared to a global average of 0.74 percent. Since 1995, their average annual contribution to Azerbaijan's GDP has been 2.17 percent.

However, many of the workers have returned from Russia to Azerbaijan as a result of the decline in the Russian economy and they were reported to have taken part in the socioeconomic protests across the country in January 2016.

Nevertheless, the role of migrant workers in the economy is not as important as in countries where economic growth is largely determined by remittances from migrant workers, such as Tajikistan, where they accounted for 28.8 percent of GDP in 2015, having averaged 33.2 percent per year since 2002.[40]

Oil and gas revenues have probably been spent inefficiently for the most part.

In 2012, Azerbaijan spent $48 million on hosting the Eurovision Song Contest.[41]

Millions were spent on large-scale sports facilities and buildings: the national stadium in Baku cost 710 million euros.[42] The cost of the European Games in 2015 may have been more than $1 billion. Baku paid about $40 million in 2016 for the right to host the European Grand Prix Formula One motor race, and then almost as much was spent on the construction of the Baku City Circuit highway.[43] Money is also spent on numerous parks and museums named after Heydar Aliyev, which are being constructed in almost every major city, along with monuments commemorating the parents of Ilham Aliyev.

This astronomical spending binge was the real driver of non-oil GDP growth from 2010 till 2014. Oil GDP was declining by 2,9 percent per year on average. Non-oil GDP was growing by 8.8 percent per year on average. The main drivers of this growth were construction (average growth 18,2 percent per year) and retail trade (10 percent per year). Nearly three-quarters (72.6 percent) of construction investments were financed by the government.[44]

Virtually nothing has been done to attract foreign investment to the non-oil sector. In the 2015 Doing Business ranking, Azerbaijan holds 63rd place, far behind its neighbors Armenia (35) and Georgia (24), the latter of which dramatically improved its business climate during the presidency of Mikheil Saakashvili. In Transparency International's Corruption Perceptions Index, Azerbaijan is ranked 119th, again lagging behind its neighbors Armenia (95) and Georgia (48).[45]

Significant funds are also spent on the army. In 2015, the country spent $321 per capita, or 4.6 percent of GDP, on defense spending (Georgia spent 2.4 percent, Armenia spent 4.5 percent), or 13.5 percent of budget expenditures (in Georgia this amounted to 8.1 percent, in Armenia it amounted to 16.4 percent).[46] The high proportion of defense expenditure is largely due to the low-level simmering conflict with Armenia over the Nagorno-Karabakh Republic. Periodically, the conflict flares up into active fighting, most recently in April 2016.

In the past Azerbaijan has experienced serious political turbulence and battles for power among the ruling elite. The oil boom that began in the mid-2000s stabilized that situation, but it is quite

possible that a continued economic decline will also lead to political instability and a contestation for power by disgruntled elite groups, which have been marginalized by the current regime.

Azerbaijan's case is unique in many respects. The country's leadership was well aware that the bounties provided by oil have fairly well-defined time limits. International economic organizations gave Azerbaijan advice on saving oil revenues to mitigate the upcoming transition to a post-oil future. However, in many ways, all these warnings were ignored, and current oil revenues have been directed toward expenditure. Therefore, barring major new resource discoveries, a crisis in Azerbaijan's oil-dependent economy will occur in three to five years.

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Indonesia: Geopolitical Luck

ALEXANDER ZOTIN

In the 1970s, Indonesia's dependence on hydrocarbon exports was extremely high. However, the agricultural and industrial policies of President Suharto helped the country to diversify its economy. Indonesia's geographical location also gave it a helping hand, since during the Vietnam War it took on geopolitical importance for the United States. In the 1980s, Indonesia managed to free itself of oil dependence. The first success came with the development of agriculture, and then with that an export-oriented industry that was given preference by the United States and Japan.

Indonesia is a country in Southeast Asia, spanning from the islands of the Malay Archipelago to the western part of the island of New Guinea. The population is 257.6 million people. The country's average annual population growth rate between 1950 and 2015 was slightly above the world average, at 2 percent (1.28 percent between 2010–2015), compared to the global growth rate of 1.66 percent (1.18 percent between 2010–2015). The population of Indonesia is a little younger than the global average, with a median age of 28.4 years compared to the world average of 29.6 years.[1]

Indonesia is ethnically very diverse and includes Javanese (40.1 percent), Sundanese (15.5 percent), Malays (3.7 percent), Batak (3.6 percent), Madurese (3 percent), Betawi (2.9 percent), Minangkabau (2.7 percent), and Chinese people (1.2 percent). The predominant religion is Shia Islam (87.2 percent), followed by Christianity (7 percent), and Hinduism (1.7 percent). The main language is Bahasa, though more than 700 languages are spoken in Indonesia.[2]

In the 1950 and 1960s, Indonesia was one of the poorest countries in the world, with huge budget deficits and hyperinflation, sometimes over 1,500 percent per year. The rule of Indonesia's first president, Sukarno (1945–1966), took place against the backdrop of fierce opposition from the Communist Party (PKI) and strong nationalist forces. In the late 1950s, trade unions protected by the communists seized a number of Dutch companies as a form of revenge against the former colonizers. Later, in 1964–1965, the PKI and trade unions launched a new campaign, this time aimed at appropriating British and American companies.[3]

In 1965–1966, the army seized power in the country in response to the seizure of private property, because among the senior officers were many major landowners and shareholders of private enterprises. In the next few years, the army outlawed the Communist Party, imprisoned its leaders,

and tacitly supported the killing of hundreds of thousands of communists all over the country by paramilitary groups.[4]

Headed by General Suharto, the army launched a process of restitution of the assets confiscated by the trade unions in the years from 1950 to 1960. To attract foreign capital to Indonesia, the new government adopted liberal policies such as the Foreign Investment Act of 1967 and the Law on Domestic Investments of 1968, while also announcing a policy of friendly relations with the United States and Western countries.

Despite the brutal suppression of the communist opposition, the thirty-one years of President Suharto's rule were marked by reforms aimed at economic growth and the development of infrastructure, education, industry, and in particular, agriculture.

Suharto announced two key aims at the heart of Indonesian development: political stability and economic growth. Economic policy from 1960 through the 1980s was devised by the "Berkeley Mafia," a group of technocrats and economists who had been trained mainly in the United States. The Indonesian political elite was recruited mainly from three sources: the army (friends and supporters of Suharto); Suharto's political party Golkar; and the economic bloc led by the Berkeley Mafia.[5]

Major reforms focused on deregulation, reducing the budget deficit, and bringing inflation under control. The latter fell from 650 percent in 1966 to 13 percent in 1969. From 1969, economic policy was formulated in five-year plans, and in each a priority industry was targeted for development.

In the 1970s, it seemed that the country could not help but become dependent on resources. During the first oil boom (1973–1979), huge revenues from oil and gas sales were complemented by revenue from the export of raw materials. Exports of timber and coffee increased dramatically in the 1970s, as did the prices of non-oil raw materials. Prices of rubber, palm oil, and tin rose sharply in 1973–1974, as did coffee in 1977. By the end of the 1970s, oil and gas accounted for about 70 percent of all exports, and total commodity exports accounted for about 90 percent.[6]

Nevertheless, the authorities directed rent from natural resources for development, at least partially. Budget revenues from oil were diverted to state investment. The capital being poured into agriculture, especially irrigation and drainage of wetlands, sharply increased. In this period, the proportion of budget spending on agricultural development increased from 7.7 percent in 1973–1974 to 14.6 percent in 1978–1979. The government provided large subsidies to farmers to buy fertilizers and pesticides, and invested in the construction of roads and schools in rural areas. In 1974 alone, more than 5,000 primary schools and thousands of rural hospitals were built.[7]

Agriculture became a priority of the first five-year plan (1969–1974). Fortunately for Indonesia, this policy coincided with the World Green Revolution, in which high-yielding varieties of cereals were

bred. A beneficial role in subsidizing the development of agriculture was played by assistance from the United States, and particularly the Rockefeller Foundation and Ford Foundation. As far back as 1960, these two foundations had sponsored the establishment of the International Rice Research Institute, the purpose of which was to developed new high-yielding varieties of rice.[8,9] Their success, coinciding with pro-agrarian government policies financed by oil and gas revenues, helped Indonesia achieve a goal that the country had set for itself at the time of its independence: to produce all its own rice. If in the late 1970s and early 1980s Indonesia was buying almost a third of global rice exports, in 1985, the country was completely self-sufficient.

However, not all economic policies contributed to Indonesia's development. In the 1960s, substantial fuel subsidies were in place in the country—as in many other energy-rich nations—which led to inefficient use of these resources. Fuel subsidies have survived and are still funded, though the government is following a policy to phase them out.[10]

The financial scandal surrounding the state oil and gas company Pertamina in 1975 played a role in weaning the country of its oil and gas dependence. The company had accumulated debts of $10.5 billion—about 30 percent of Indonesia's GDP at the time—after making ill-informed investments. Unable to pay it off, Pertamina defaulted on its debt. The scandal caused severe damage to the reputation and political influence of Pertamina, and as a consequence, overly ambitious and risky investments in the oil and gas sector were halted. This was especially fortunate: since the scandal occurred in 1975, many oil and gas projects were canceled before the drop in oil prices in the 1980s, a period when many projects started during the period of high oil prices became unprofitable.[11]

The Pertamina scandal and the closure of some of its projects strengthened the reformist bloc in the government, and some of the old "Berkeley Mafia" returned. The priority of the second five-year Plan (1974–1979) was the development of regional infrastructure beyond the most populated island of Java.

After the fall of oil prices in the early 1980s, the authorities quickly adapted to the changed situation. The priority of the third five-year plan (1979–1984) was the development of an export-oriented industry; the fourth (1984–1989) focused on the creation of heavy industry; the fifth (1989–1994) on the development of telecommunications and transport infrastructure; and the sixth (1994–1999) was to attract foreign investors, though this one was not completed due to Suharto's departure.

By the end of the 1980s, the proportion of oil and gas in total exports was gradually declining. In 1988, oil accounted for 23 percent of exports, while gas condensate accounted for 17 percent. Other raw materials made up a considerable share too—for example, rubber at 8 percent and timber at 12 percent. But at around this time, groups of products began to appear that were typical exports for economies in the early stages of development of what is known as the Asian growth model: light industry products (3.2 percent) and textiles (3 percent).[12] The main export destinations were Japan, the United States, South Korea, and Malaysia.

Measures taken to implement the government's stated economic goals included the reduction of budget expenditures, the devaluation of the rupiah in 1983 and 1986, tax breaks, the liberalization of foreign trade, and preferences for foreign investors. The country developed several large industrial conglomerates mostly controlled by representatives of the Chinese diaspora, including Salim Group, Sinar Mas Group, Astra Group, Lippo Group, Barito Pacific Group, and Nusamba Group. Suharto largely encouraged the development of ethnic Chinese business, since he was not afraid of political pressure from this minority, and the collaboration bore fruit. GDP growth from 1970 to the 1990s was impressive, averaging 6.4 percent per year in the 1980s and 4.4 percent in 1990. The industrial sector grew even faster, accounting for a growing share of GDP. In 1991, industry outstripped agriculture for the first time as a percentage of GDP.

Suharto and his cronies were far from the ideals of meritocracy, and they amassed significant wealth during his reign. Corruption acted as a brake on Indonesia's development, but it was not able to completely block positive trends in the economy.

IN THE RIGHT PLACE

Some researchers have noted that Indonesia's economic development was helped by its geopolitical situation.[13] The Cold War was a chance for development in many East Asian countries, regardless of their natural resources, as they found themselves on the fringes of a conflict between the superpowers. The Korean War of the 1950s and the Vietnam War of the 1960s and 1970s involved the United States in regional affairs and contributed to the flow of foreign aid to certain countries in the region. At the same time, historical links with Japan—which had essentially colonized many East Asian countries in previous times—made it possible to attract investment flows from Japan.

President Suharto pursued his pro-market policy at the height of the Vietnam War. In the United States, there were fears that other countries in the region would follow Vietnam down the communist route, and in the early 1960s, concern about the influence of the PKI in Indonesia. After the military seized power in the country in 1965, the United States, along with fifteen other Western countries and international organizations, established a fund—the Intergovernmental Group on Indonesia (IGGI)—in 1966,[14] through which aid was sent to the country. Between 1967 and 1971, IGGI provided Indonesia with $2 billion a year, supporting the pro-market policies of Suharto.[15] Help also came from the International Monetary Fund (IMF), whose economists provided advice and guidance to the Indonesian government. Later, the World Bank and Asian Development Bank joined in assisting Indonesia as donors and advisors.

Support from Western countries and international donors for Indonesia's political regime, along with the country's macroeconomic stabilization, was a clear signal to foreign companies that Indonesia was a safe place to invest private capital. Initially, investments were concentrated in the commodity

sectors, but over time, foreign capital began to penetrate the industrial sector, especially after the government launched a program of import substitution during the first oil boom of the 1970s and early 1980s.

In 1980, the United States provided Indonesia with trade preferences under the Generalized System of Preferences (GSP),[16] a U.S. mechanism to stimulate trade with developing countries. Japan granted preferences to Indonesia at the same time.[17] These benefits helped Indonesia to reorient its modernization policy. Focus on import substitution was replaced by the well-established export-oriented strategy that had been successful in South Korea and Taiwan. This helped Indonesia to avoid catching the Dutch disease, saving the country from experiencing the decline of the industrial sector due to the success of the extractive industries.

A second factor impacting Indonesia's non-oil development was economic prospects associated with geographical proximity to Japan and the developing countries of East Asia (in particular, China, from the 2000s). In the late 1960s, Japan renounced control over exports of capital, thereby initiating a wave of foreign investment in Asia, some of which went to Indonesia. The second wave of Japanese investment in East Asia, including Indonesia, was launched after the Plaza agreement in 1985, in which Western countries and Japan agreed on the need for a revaluation of the Japanese yen. Immediately after that, Japanese companies began to search for a country with cheap labor for the outsourcing of production.

The growth of new industrialized countries in East Asia also indirectly helped Indonesia. Toward the end of the 1980s, their privileges under the GSP ended and a major part of industrial investment was poured into comparatively poorer Indonesia. This inflow was especially important in the 1980s and 1990s, when energy prices were low and Indonesia's economy needed additional stimulation, which was provided by the relocation of investment.[18]

THE ASIAN CRISIS

This boom, however, led to the formation of bubbles and a subsequent crisis. In the late 1980s and early 1990s, many East Asian economies—including Indonesia—grew very quickly, in a period that came to be known as the Asian economic miracle. Countries achieved a rapid rise through the investment growth model, which was a combination of massive investment in manufacturing, export orientation, and reliance on cheap labor. This combination allowed the "Asian tigers" to produce goods for export at very competitive prices.

Fixing the rate of national currencies against the U.S. dollar further bolstered growth. The Indonesian rupiah was effectively pegged to the dollar from 1986, and its average annual depreciation of 3 percent was due to disparity in inflation, which in Indonesia had been about 3 percent higher than in the

United States. The resulting absence of currency fluctuation risks and higher interest rates made Indonesia a profitable place to invest foreign capital.

In 1995, however, the United States, Japan, and Germany adopted the so-called reverse Plaza agreement. The original agreement in 1985 had been to take measures to weaken the dollar, but now it was decided to strengthen the dollar and weaken the yen, as its excessively high exchange rate was seriously impeding Japanese exporters. The reverse Plaza agreement triggered the Asian crisis of 1995–1997, causing the yen to fall by about 60 percent against the dollar. Japanese exports became cheaper and more attractive compared to the exports of the Asian tigers, whose currencies were tied to the dollar.

Investors started to get rid of assets denominated in Thai baht in the spring of 1997. Thailand could not hold out for long and in July was forced to devalue its currency. Once Bangkok stopped pegging its currency to the dollar, investors realized that the other "tigers" would not be able to either, so investors began to sell assets in Indonesia, Malaysia, South Korea, and the Philippines. Capital flight and devaluation crippled the banking systems of those countries, as debts were denominated in rapidly soaring dollars and assets in depreciating local currencies.

The Asian crisis of 1997–1998 hit Indonesia harder than many other East Asian countries.[19] The reasons were the largely uncontrolled development of the banking sector after the liberalization of banking legislation in 1988, a series of IPOs on the JSE Stock Exchange that opened in 1977, the inflow of foreign capital in the 1990s, and the real estate bubble. Average GDP growth rates from 1986 (following the original Plaza agreement) through 1997 amounted to 7.5 percent. The impact of the crisis was magnified by the political instability that hit the country at the same time as the economic crisis.

The rupiah exchange rate fell from 2,600 to the dollar in August 1997 to 14,800 in January 1998. Attempts by the central bank to stabilize the exchange rate led to an outflow of capital and the depletion of reserves, resulting in Indonesia being forced to seek the assistance of the IMF. GDP fell 13.5 percent in 1998, compared to 5.5 percent in South Korea, 7.4 percent in Malaysia, and 7.6 percent in Thailand.

The first riots in Indonesia broke out after the government raised the price of gasoline by 70 percent in spring 1997, and these soon spread into further protests. The wealthy Chinese diaspora suffered in particular, as popular dissatisfaction with the economic situation manifested itself in the form of anti-Chinese pogroms. After riots in Jakarta and other cities in May 1998, Suharto stepped down, handing over power to Vice President B. J. Habibie.

The Asian crisis was the starting point for the democratization of Indonesia in the 2000s. Habibie liberalized the country's political system and media. In 1999 the country held parliamentary

elections, which were won by the newly formed Indonesian Democratic Party of Struggle (PDI-P) led by Megawati Sukarnoputri, the daughter of President Sukarno (who had been deposed by Suharto). However, two other parties—Golkar and the National Awakening Party (PKB)—formed a coalition and elected the moderate Islamist Abdurrahman Wahid as president. But the coalition proved to be unstable, and in 2001, Wahid was impeached over corruption charges.

He was succeeded by his vice president, Megawati Sukarnoputri, and in 2004, Indonesia held its first direct presidential election. Since then, the country has been in a regular four-year electoral cycle.

Although the impact of the 1997–1998 crisis was keenly felt, this century the Indonesian economy has grown rapidly: 5.4 percent in 2010 and then on average 5.5 percent per year from 2011 to 2015. The level of public debt has been reduced from 87 percent of GDP in 2000 to 27 percent in 2016. Since 1998, the current account balance has been positive, thanks to a growing trade surplus, which, after peaking in 2000 at 10 percent of GDP, has now gradually declined to around zero today.

Economic growth was facilitated first by the low base effect after the crisis;[20] second, by the macroeconomic stability attained in 2000;[21] and third, by the continuation of the policy of export-oriented production and attracting foreign investors.

Falling oil production in conjunction with the growth of domestic consumption caused the country to become a net importer of oil in 2004.[22] In 2009, the country suspended its membership in OPEC and only renewed it in 2016.[23] The increase in prices for non-oil raw materials in the 2000s and 2010s meant that the country increased its exports of these materials in dollar terms.

High commodity prices partly slowed down the transition to a non-resource-based economy in the 1990s. In 2008, coal amounted to 9.2 percent of exports, whereas in the 1990s that figure had been less than one percent. Palm oil accounted for 11 percent of exports, rubber 5.3 percent, copper ore 2.9 percent, and nickel ore 1.7 percent. But the 2000s have shown that Indonesia is capable of developing with a lesser reliance on raw materials: electronics and engineering products made up about 9 percent of exports in 2008, and light industry products increased to about 10 percent.

One helpful factor was secondary outsourcing of labor-intensive industries—such as Nike shoe manufacturing—not to China, which had become relatively expensive, but to the less developed countries of East Asia, including Indonesia. The Chinese renminbi has almost doubled against the Indonesian rupiah in the last ten years (from 1,100 rupiahs to the renminbi to 1,950 rupiahs to the renminbi). Combined with the sharp rise in wages in China, this has meant that Indonesian labor remains relatively cheap. According to the Economist Intelligence Unit, in 2014, salaries in Indonesia and Thailand averaged about $1 per hour compared with $4 per hour in China.[24] In 2008, the average in Indonesia was about $0.80 per hour versus $1.80 in both China and Thailand.[25]

In 2014, exports became slightly more diversified: coal (10 percent), palm oil (8.9 percent), rubber (2.7 percent), electronics and engineering products (10 percent) textiles and footwear (11 percent), chemical products (4.5 percent), and transportation vehicles (4 percent).

Indonesia's Economic Complexity Index (ECI) for exports, as calculated by MIT, is −0.245, placing the country in 79th place in terms of economic complexity out of 148 countries. In 1964, Indonesia was much less developed, placing 85th out of 100. The main destinations for Indonesian exports are Japan ($24.9 billion), China ($20.8 billion), the United States ($18.8 billion), Singapore ($18.7 billion), and India ($13.6 billion).[26]

Indonesia is one of the relatively successful examples of a country managing to turn off from the slippery slope to dependence on raw materials. The country is in a region famous for its economic miracles: South Korea, Singapore, Taiwan, Hong Kong, and China have all, at different times and with some differences, followed the same path of economic development that the American economist Paul Krugman once described as "perspiration, not inspiration." The Asian development model, with its focus on cheap labor and exports, is now being repeated by Malaysia, Thailand, Vietnam, and Indonesia. Geographical and partial cultural proximity to regional powerhouses has affected Indonesia's development model.

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Saudi Arabia: Islands of Efficiency in a Sea of Extravagance

ALEXANDER ZOTIN

In just a few decades, Saudi Arabia has been transformed from a poor Bedouin society to a relatively rich nation. The process was accompanied by the simultaneous preservation of traditional political institutions and the rapid growth of the state apparatus, with experimental economic practices financed by oil rents. Most of the latter has been ineffective and wasteful, but in certain areas it has also created islands of efficiency.[1]

The population of Saudi Arabia, a Middle Eastern country located on the Arabian Peninsula, is 31.5 million people. The country's annual rate of population growth from 1950 to 2015 is among the highest in the world at 3.56 percent on average (2.32 percent from 2010 to 2015), compared with the average global growth rate of 1.66 percent (1.18 percent in the same period).[2] The median age of the population is 28.3 years, close to the global average of 29.6 years. Almost a third of the population are migrant workers—9 million as of 2013: 6.4 million men and 2.6 million women. These workers are mainly from India, Pakistan, Bangladesh, and the Philippines.[3] The indigenous population is Arab, about 90 percent Sunni and 10 percent Shia. The main language is Arabic.

Saudi Arabia is a typical example of a rent-based state, with oil accounting for 91 percent of total exports. Oil revenues for 2014 amounted to about $10,000 per capita, but due to a fall in oil prices, in 2015 it dropped to about $5,500.

Present-day Saudi Arabia is considered to have emerged in 1902, when Prince Abdulaziz of the Al-Saud family captured the modern capital Riyadh and displaced the Rashidi tribe. By 1930, he had gained control over almost the entire Arabian Peninsula, and by 1932, Abdulaziz had united the disparate regions of the country and established the monarchy of Saudi Arabia.

Today, the ruling Al-Saud family numbers 7,000 to 15,000 people, according to various estimates, of whom about 2,000 are considered influential. Calculating the family's wealth is virtually impossible, since many assets are difficult to value while others are hidden. However, it is clear that they are enormously wealthy. The U.S. Borgen Project estimates the wealth of the Al-Saud family at $1.4 trillion.

In 1938, the California-Arabian Standard Oil Company (later renamed the Arabian American Oil Company, or Aramco)[4] discovered oil fields in Saudi Arabia. The outbreak of World War II set back their development, but by the end of the 1940s, the petrodollars had begun flowing in. In 1944, the kingdom earned $1.5 million in customs revenue, $3 million from pilgrims traveling to Mecca and Medina, $3 million from local taxes, and only $1.6 million in revenues from selling oil.[5]

After the discovery of oil, the tribal country saw its wealth soar. Rent began to grow steadily, from $10.4 million in 1946 to $56.7 million in 1950. That year, Abdulaziz threatened to nationalize oil production, and Aramco agreed to profit sharing at a ratio of 50/50. Nationalization occurred gradually anyway, through the purchase of U.S. shares in Aramco, and the process was completed by 1980. In 1960, revenues from oil exports were already $1.3 billion, and oil accounted for 99 percent of Saudi Arabia's total exports. By 1970, oil exports were worth $5.5 billion.[6]

The 1973 oil crisis increased state revenues dramatically. When all the Arab countries—all members of the Organization of Petroleum Exporting Countries (OPEC)—stopped supplying oil to countries that supported Israel in its conflict with Syria and Egypt (primarily the United States and its Western European allies), the price of oil rose from $3 to $12 per barrel over the course of the year. Riots and revolution in Iran in 1978–1979, and the subsequent Iran-Iraq War, prompted a new spike in prices, resulting in a barrel of oil costing more than $30 (the equivalent of over $100 per barrel in 2016 dollars).

In 1980, revenues from oil exports amounted to $162.5 billion (at the 1990 rate), and oil accounted for almost 100 percent of exports and 94 percent of budget revenues. Saudi Arabia's GDP per capita reached $13,000 (at the 1990 Geary-Khamis dollar rate[7]), exceeding the GDP per capita of countries such as Finland and Austria.[8]

In the period of low oil prices between 1980 and 1990, according to data from the International Monetary Fund, revenue from exports fell to about $50 billion a year, slumping to a low of $23 billion in 1998 (at 1990s rates). During this period, the country suffered a significant recession (in 1982, GDP fell by more than 20 percent), had a persistently high budget deficit (from 2 to 9 percent of GDP) and accumulated considerable debt (nearly 100 percent of GDP).[9]

FORMATION OF A RENT-DEPENDENT SOCIETY

As a result of plentiful oil revenues in the period from 1950 to 1970, the country developed a system of clientelism (typified by relationships of dominance between a patron and client, often based on kinship). According to Steffen Hertog, an American expert on the Middle East, the redistribution of petrodollars between rival branches of the Al-Saud family caused "uncontrolled Byzantine expansion

[of bureaucracy] based on patronage." Preference was given to representatives of the tribes of the Najd region, accounting for about 20 percent of the total population, who were related to the royal house. Forty-four percent of the top tenth percentile of property owners are from the Najd region.[10]

Balancing power and money was reflected in the establishment of ministries and departments, in which Abdulaziz and his forty-five sons placed relatives, members of influential clans, and sometimes successful commoners, which led to an overgrown client network.

Bureaucracy within the monarchy came ahead of the needs of citizens, especially during the reigns of Abdulaziz and his son Saud. The system was created for the formalization of rent distribution and only secondly as a mechanism through which to provide services to the population. Ministries were the preserve of certain clans; for example, the Finance Ministry was reserved for the Aniz tribe from the Qasim region of Najd, while the Ministry of Agriculture was reserved for the influential al-Sheikh clan of clerics.[11]

In the 1950s, the national income was still tiny by international standards, but the country's needs were also modest. Saudi Arabia's economy was not very different from a subsistence economy in which subjects were governed through the mediation of tribal leaders. There was no need for a public space for the discussion of issues such as the budget, or taxes, as there were almost none (a tradition that is preserved to this day).

The budget itself grew by leaps and bounds due to external factors. The country had neither a constitution nor the formal mechanisms of political participation and had absolutely no foreign policy experience. Slavery was abolished only in 1962. There was no working class, except for the workers at Aramco in the Eastern Province, where demonstrations were suppressed in the 1950s and 1960s.[12]

In a place where there was nothing other than oil, predictably the state apparatus grew. "Many institutional idiosyncrasies of Saudi Arabia would not be thinkable without rent surpluses that allowed institutional sprawl and costly redundancy," says Hertog. "Oil income has in some cases allowed for the creation of very efficient bureaucratic islands—[the Saudi Arabian Monetary Agency] and the like, where select commoners played crucial roles—but in others has boosted neopatrimonialism."[13]

THE PRIVATE SECTOR

The distribution of rents pushed private businesses into the background, if they were not associated with the government rent system. The private sector accounted for only 20 to 30 percent of GDP in the years from 1960 to 1970, increasing slightly during the 1980–1990 period of low oil prices, only to return to current levels of about 20 to 30 percent.

Employment in the private sector is generally underpaid, undervalued, and tiring. The work is performed by migrant workers, including construction workers and laborers from India, Pakistan, and Bangladesh; service staff and maids from the Philippines; construction foremen from Egypt; and senior managers from Europe.

In the public sector, wages are higher and the working conditions are better, and this is where Saudis work. Wages earned by migrants and Saudis in the private sector—accounting for 70 percent of all jobs—equaled only 7 percent of GDP. Despite the fact that 85 percent of employees in the private sector are migrants and only 15 percent are Saudis, Saudis working in the private sector earned 3 percent of GDP, whereas migrants earned 4 percent. (Overall, migrants account for about 60 percent of people employed in the economy, while Saudis make up about 10 percent of the total.)

The vast majority of Saudis work in the public sector, accounting for 30 percent of all jobs. Their wages are equal to 14 percent of GDP—twice as high as in the private sector. The state provides its employees with free education in the country and abroad, free health care, interest-free mortgages, and other benefits. This is in addition to the backdrop of virtually no taxes, with the exception of the Islamic zakat tax (a religious tax in favor of the poor) of 2.5 percent and a social security tax of 9 percent taken from both the employer and the employee. Other taxes apply only to non-residents.

WHEAT IN THE DESERT

Attempts to develop economic sectors not related to the extraction and processing of oil have often failed in Saudi Arabia, and were often a disguised form of rent distribution. For example, in 1970, the monarchy decided Saudi Arabia should implement its own food import substitution program, at a time when import substitution policies were being attempted in many developing countries across the world.

Saudi Arabia planned to become fully independent from imports by means of massive state subsidies and prohibitive tariffs on imports. The government provided subsidies to agricultural businesses for fertilizer, seed stocks, irrigation, equipment and labor costs, and also bought wheat from farmers at a price three times higher than the global average.[14]

In the mid-1980s, the state allocated about $2 billion a year for this project and also introduced a 100 percent tariff on wheat imports.[15] As a result, production increased 26-fold, from about 200,000 tons in 1980 to 4 million tons by 1992. Net imports of 500,000 tons in 1980 turned into net exports of 2 million tons of wheat in 1992,[16] and in the early 1990s, the country became the world's sixth largest exporter of wheat.[17]

The Saudi exports were often nonprofit, however: grain supplies were sent as aid to countries in Africa.[18] Food production for domestic consumption increased from 34 percent of total production

in 1984 to 74 percent in 1995, while the proportion of agriculture in the GDP grew from 3.4 percent to 7 percent.[19]

Agricultural production in the years 1979to 1991 grew on average by 12 percent per year. However, import independence acquired at such a high price (2 to 3 percent of GDP in the 1980s and about 5 percent of budget expenditures) proved inefficient. In the crisis years of the 1980s, marked by low oil prices, interest groups (de facto oil rent recipients) insisted on the preservation of subsidies.[20] According to estimates from the UN's Food and Agriculture Organization (FAO), 50 percent of the subsidies were received by one percent of farmers: about 300 people with large farms.[21] Only in the 1990s were subsidies gradually reduced and import tariffs on food decreased.

The program was downsized not only to save budgetary funds, but also because of the obvious absurdity of the program. The production of wheat requires large volumes of water, and Saudi Arabia—of which 99 percent is desert—was already forced to get 8 percent of its water through the expensive process of seawater desalinization.

For countries with a water resource deficit that produce grain, which requires a lot of water and is expensive, it is more cost-efficient to import these goods from countries with a surplus of water. Saudi Arabia was one of the largest exporters—an economic distortion that was possible only due to subsidies from oil rent.

In the 2000s, the experiment with wheat import substitution was ultimately considered a failure, and a priority policy of water conservation was announced. Since 2008, imports of wheat have grown by 12.5 percent per year. The number of farmers involved in the production of wheat fell from 34,000 people in 1993 to 6,000 in 2012, and it was decided that the country should import 100 percent of its wheat by 2016.[22]

THE ROLE OF RELIGION

Big money can be a catalyst for innovation and technological progress, but it can also help to preserve a traditional society, and Saudi Arabia is a vivid example of this. The country's law is based on Islamic Sharia law, in its most radical interpretation. The official interpretation of Islam in Saudi Arabia is Sunni Wahhabi Hanbali Madhab, one of the most orthodox schools of Islamic law. On a practical level, it is an ultraconservative puritanical Islamic ideology that rejects the vernacular worship of relics and saints and is sharply opposed to all the Western influences of the modern world.

It is not only Western influences that are rejected, however. Some Saudi scholars consider Shia Muslims (the majority of Iran's population) to be heretical. A Shia diaspora exists in Saudi Arabia, accounting for about 10 percent of the population. They live mostly in the oil-producing Eastern Province, and once, in 1978, organized a rebellion.

The prevailing conservative ideology has many social and economic manifestations. There is vocal opposition to women's participation in public life and the workplace. Women cannot appear in public unless accompanied by male relatives, nor are they legally allowed to drive. Unemployment among women is 32.8 percent—nearly three times higher than the overall unemployment rate of 11.6 percent.[23]

STABILITY IN SPRINGTIME

Unemployment, particularly among young people, is worrying, especially given that the kingdom is one of the fastest-growing countries.

"Unlike other Arab countries, Saudi Arabia has been able to absorb the excess of competently educated youth," says Andrey Korotaev, a Russian scholar of the Middle East. "The source of this excess is the demographic boom of the 1980s, energized by petrodollars. There have also been extensive investments in perinatal medicine, which has greatly reduced infant mortality. Subsequently, the government has had to use many methods to incorporate youth into society. There has been an increase in the employment of young people as teachers in schools, so that now a teacher in the classroom has only 10 to 11 students."[24]

For now, it is working. The monarchy managed to steer clear of its own Arab Spring. In 2011, which was marked by minor unrest, the authorities decided to spend an additional $130 billion on the needs of the population. The money was spent wisely: on "subsidies for the marriages of young people, and assistance with the purchase of housing," says Korotaev. "The authorities justly believe that a settled family man with a wife and children and a home is less likely to riot than young people preoccupied with sex and property."

INEFFICIENCY ON A CONTINENTAL SCALE

However, not all resources in Saudi Arabia are used wisely. In the 2000s, oil prices increased, and by 2014, GDP per capita had risen to $25,200: the level of a relatively poor Western European country or, for example, South Korea. (In Russia, GDP per capita in 2014 was $15,000.)

From 2003 to 2013, the country managed to reduce the public debt from 82 percent to 3 percent of GDP. Up to 90 percent of all budget revenues came from oil, while the remaining 10 percent came from taxes on profits of foreign corporations, licensing fees, and the Islamic zakat tax.[25] The non-oil budget deficit in 2013 amounted to 56.6 percent of the non-oil GDP, while it is estimated by the IMF that a sustainable non-oil deficit cannot be more than 30 percent of non-oil GDP, as noted by the Economic Research Forum.[26]

In the same period, inefficient use of the main natural resource increased. In 2000–2010, Saudi Arabia's domestic oil consumption increased by 78 percent, outpaced only by the rapidly industrializing China at 90 percent.[27] In 1973, the country's oil consumption was only 0.5 percent of global consumption, but in 2015, it was 3.9 percent. A country with a population of only 31 million people had risen to fifth place in the world in terms of oil consumption, exceeding Germany, Brazil, and the whole of Africa, despite the modest size of its economy and population in comparison with them.

This was made possible by huge subsidies and energy being available almost free of charge. In 2014, a liter of gasoline cost just $ 0.12.[28] Electricity was virtually free until recently, at $0.15 dollars per kilowatt-hour (kWh) for the public (up to a maximum of 2,000 kWh per month) and $0.03 per kWh for industry. In the United States, by comparison, electricity costs about $0.12 per kWh. Water is still supplied practically free of charge.

When resources cost people practically nothing, there is no motivation to save, hence the shocking levels of consumption. The problem is compounded by the fact that in Saudi Arabia, a significant proportion of electricity—35 percent—is still generated by burning crude oil (compared to 26 percent from fuel oil and 39 percent from natural gas). This is like burning banknotes on a fire: electricity produced by burning oil is more than three times as expensive as burning coal or natural gas.[29] In an average year, about 600,000 barrels of oil are burned a day just to generate electricity. In the scorching summer months, when air conditioners work overtime, this figure jumps to 900,000 barrels per day.[30]

Fantastically low domestic oil prices help, since until a small increase in 2016, government subsidies had kept prices at $4.23 dollars per barrel. For comparison, in Russia, where domestic oil prices are also indirectly subsidized by taxes, prices are still much higher than in Saudi Arabia: about $33 per barrel, against a world price for Ural crude of $45 per barrel.

In addition to spending on energy subsidies, Saudi Arabia spends huge amounts of money on the military-industrial complex. Over the past thirty years Saudi Arabia has been the world leader in spending on arms per capita (only neighboring Oman has snatched the title from it from time to time). In 2015, Saudi Arabia spent $2,774 per capita, or 13.6 percent of GDP on the army (compared with 3.3 percent in the United States and 5.4 percent in Russia), amounting to 27.4 percent of budget expenditures (this figure is 9.2 percent in the United States and 13.7 percent in Russia). From 1988 to 2015, the monarchy spent a total of $1.16 trillion on arms: about half of the $2.4 trillion spent by China, whose population is forty-three times larger, during the same period.[31]

Saudi Arabia sees Shiite Iran as its main regional rival. Judging by diplomatic correspondence from 2008 made available by WikiLeaks, the monarchy called on the United States to attack Iran.[32] The current wars in Syria and Yemen, as well as the civil strife in Bahrain, where there is a confrontation between the Shia and Sunni diaspora, are seen by some researchers as proxy wars between Saudi Arabia (supporting Sunni factions) and Iran (supporting Shiite factions).[33]

The effectiveness of this military expenditure is doubtful, given the not very successful military operations conducted by Saudi Arabia in neighboring Yemen since 2014. In the ranking of army combat capability prepared by Global Firepower, Saudi Arabia ranks 24th, behind Iran (21st), Israel (16th) and Turkey (8th).[34]

THE ISLANDS OF EFFICIENCY

Despite numerous inefficient outgoings, there are some successes. During the period of high oil prices, the government did make attempts to diversify the Saudi economy, primarily by focusing on petroleum refining. Right through the period of declining oil prices, Saudi Arabia managed to modernize and build several large high-tech refineries. Among them are the giant SATORP refinery built in Jubail in collaboration with Total in 2014, the YASREF refinery built in collaboration with Sinopec in Yanbu, and a private Aramco complex in Jizan, each capable of refining 400,000 barrels a day.[35]

These refineries are some of the largest and most technically advanced in the world, making refining one of the areas of successful industrialization in Saudi Arabia between 2000 and 2010. According to the country's former minister of oil, Ali al-Naimi, Saudi Arabia is going to increase its total refinery capacity up to 3 million barrels per day by 2017 and become the second biggest exporter of petroleum products in the world after the United States.[36]

SLOW REFORMS

Saudi Arabia can weather a drop in oil prices relatively easily. The riyal, Saudi Arabia's national currency, is stable against the dollar, unlike many currencies of oil-exporting countries, which experienced large-scale devaluation in 2014–2016. The riyal-to-dollar exchange rate was fixed at 3.75 to 1 in 1986 and has since remained unchanged, while domestic inflation was higher than in the United States.[37] The huge reserves of the Saudi Central Bank help to prop up the riyal: though reserves fell by 191 billion from a record high of 745 billion at the end of the third quarter of 2014, they remain enormous, at 554 billion,[38] which is a return to their level at the beginning of 2012. The reserves are also used to close a huge budget deficit that has emerged due to the sharp drop in oil revenues, with only a cosmetic reduction of expenditures in Saudi Arabia. In 2015, the budget deficit amounted to $98 billion (15 percent of GDP), and in 2016 looked unlikely to be much smaller.

The traditional double-digit current account surplus was replaced by a deficit in 2015 (8.3 percent of the GDP). The forecast for 2016 was a deficit worth 6.6 percent of GDP. Given the high volatility of the country's current account, depending on oil prices, the current account deficit in the last two years is not yet a cause for concern.

Concern, however, is growing. Even the Saudis cannot afford to endlessly finance the budget from reserves. There is a need for reform.

So far, the process of reforms has been slow. In 2016, the government began to cautiously remove some energy subsidies, with limited progress. That year, the price of a liter of gasoline rose to $0.24 from $0.12 in 2015, while diesel rose from $0.07 to $0.21. Domestic oil prices rose to $5.87 per barrel. This only slightly increased the price of electricity, and even then only for high levels of consumption. Those consuming 4,000 to 6,000 kWh per month will have to pay $0.05 per kWh, up from $0.3.

Attempts to raise the price of water led to dissatisfaction publicized on social media networks. For households consuming between zero and 100 cubic meters (m^3) of water, the price of $0.01–$0.02/m^3 rose to $0.4 to $2.4 on the consumption of 30 m^3 and upwards. The Minister of Water Resources was dismissed as a result, but the energy subsidies elimination program will last for five years, during which it is planned to bring the prices to the global average.[39]

Saudi Arabia has also attempted to save oil. In the spring of 2016, production from the Wasit gas field began, which helped decrease the amount of oil burned for electricity generation in the summer of 2016 from 900,000 to 700,000 barrels per day.[40] Despite these efforts, however, the country continues to expend as much energy as the entire African continent.

SAUDI ARABIA: 2030

Current success may be modest, but the country's plans for the future are very ambitious.

"Saudi Arabia will be able to live without oil by 2020," Prince Mohammed bin Salman—the heir to the throne, defense minister, and head of the Economics and Development Board—said in an interview with *Al-Arabiya* in April 2016.[41] The prerequisites for economic transformation are outlined in an economic diversification program titled "Vision of Kingdom of Saudi Arabia: 2030" that was adopted by the cabinet of ministers on April 25, 2016.[42]

The reform program is wide-ranging, but the main element is large-scale privatization. Its first step will be the sale of less than 5 percent of the shares of Aramco, which may then sell additional packages and shares of its subsidiaries. Aramco is the most valuable company in the world, even when non-public companies whose shares are not listed on stock markets are taken into account. The market price of Aramco's assets is unclear: estimates range from $0.7 trillion to $10 trillion (the most valuable public company in the world, Apple, is now worth almost $0.7 trillion[43]). But even with a conservative estimate of Aramco's value (Bloomberg estimates $2.5 trillion when the price of oil is at $10 per barrel), an offering of 5 percent of shares will be the largest IPO in history.

Revenue from the sale of even 5 percent of Aramco is more than enough to cover the entire 2016 budget deficit. However, the money will be put into the state investment fund, which will manage Aramco's privatization and the state's shares, as well as investing funds from the privatization in assets around the world. According to Prince Mohammed, the fund will manage 3 percent of the planet's total assets.

In addition to privatization, the kingdom has a whole host of other reforms planned, beginning with monetizing the country's geographical position. The country has access to waters through which 30 percent of global commercial trade flows. Among the projects highlighted is a logistics transport highway from Egypt to Saudi Arabia, which will revitalize trade and passenger flows through the Suez Canal.

Second, the kingdom will support small businesses. In 2030, their proportion in GDP is expected to rise from the current 20 percent to 35 percent. Planned aid measures include reducing administrative pressure and facilitating access to credit.

Third, there are plans to develop the non-oil sector of raw materials. Saudi Arabia has reserves of gold, silver, and phosphate, along with uranium reserves that account for 6 percent of the world total. At the same time, as noted by Prince Muhammad, only 3 to 5 percent of non-oil raw material reserves were being developed. The reform plan points to the need to involve the private sector in the non-oil raw materials and to simplify licensing. The state also plans to develop renewable energy so that its capacity reaches 9.5 gigawatt-hours (8 percent of all power) by 2030.

Other plans include developing tourism by creating coastal resorts on the Red Sea and increasing revenues from pilgrimages to Mecca and Medina. The number of pilgrims is forecast to increase from the current 8 million per year to 30 million in 2030.

Also on the reform list are bigger investments in science and education. By 2030, the number of Saudi universities in the top 200 is expected to increase to five. The development of non-oil sectors should lead to additional demand for jobs, and therefore unemployment should be reduced from 11.6 percent to 7 percent by 2030.

Finally, the efficiency of public administration will be increased, including through the introduction of online services. This particular plan has already seen significant progress. In 2004, the country rose in the United Nations e-Government Index ranking from 90th to 36th. The goal for 2030 is to be in the top five.

Over the past fifth years, Saudi Arabia has managed to preserve its traditional political institutions, funding them through oil rent. The latter also allows the economy to remain ineffective.

Nevertheless, economic policy has shown that the country is capable of correcting inefficiencies and errors, albeit slowly. The existence of islands of efficiency across the economy gives hope for positive developments in the future. However, the existing islands of efficiency themselves depend on oil rent, and a serious decline in economic dependence on oil, even in the medium term, is hardly feasible.

NOTES

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United Arab Emirates: Sovereign Liberalism

ANDREY MOVCHAN

The United Arab Emirates, a small federal state on the coast of the Persian Gulf, has existed as a state since 1971, when Britain accepted the territory's right to self-determination. The state was formed as a union of seven of nine emirates once known as the Trucial Coast sheikhdoms. Bahrain and Oman, descendants of those same eighteenth-century pirate states, declined to join the federation.

The territory of what is now the UAE had a population in 1950 of only 86,000 people. Today it boasts a population of 9.3 million and a growth rate of 2.7 percent per year: an impressive pace among countries with a GDP per capita of more than $38,000. The UAE has the 24th highest GDP per capita in the world and the third among countries where more than 10 percent of the GDP comes from oil revenues. The reason for the country's high economic ranking is its huge hydrocarbon reserves: 97.8 billion barrels of oil (6.6 percent of world reserves) and 6 million cubic meters of natural gas (the seventh largest in the world). A total of 94 percent of this wealth is found in the territory of one of the emirates—Abu Dhabi—while Dubai holds another 4 percent.

These oil and gas reserves place the UAE 31st in the world in terms of GDP size. The country's GDP for 2016 was projected at $370 billion (0.5 percent of the world's GDP in a country that is home to just 0.07 percent of the world's population).

A SPECIAL CASE

The UAE is far from a typical country experiencing the effects of a resource curse. First of all, the country was born during a period of rapidly rising oil prices and did not live through the period before the oil boom as a state. In 1971, when the United Arab Emirates were formed, their population was estimated at just over 500,000, oilfields had been in operation for about ten years, agriculture was less than one percent of GDP, and the main manufactured goods (except from the new oil sector) were handcrafted folk items. These conditions made it possible to form an economic strategy from scratch, without having to adapt to a legacy of resource dependence, but with the opportunity to adopt best practices—at least the ones that existed in the 1970s.

The second important feature of the country, and one that was common in most of the Gulf Cooperation Council countries, was the strong hereditary power of emirs in each emirate. This power was inherently closer to its tribal form than to the late-feudalism observed in authoritarian, resource-rich countries in other regions. This form of government, based on and supportive of local traditions, shaped the path of the country's development in times of high oil prices. Combining the seven emirates around Abu Dhabi, which was direly needed by the other emirates in which oil reserves were either very modest or nonexistent, also played a role. Abu Dhabi was a natural central sponsor and in exchange was awarded enough power to carry out centralized policy.

The UAE's federal system grants individual emirates the right to create their own legislation, law enforcement agencies, and standards of production, and to allocate most of their income, ruling out the possibility of creating countrywide strata that would test the strength of the system or the country's leaders. During the forty-five years of the country's existence, only once—in 1987, at the lowest point of the stagnation of oil prices—was there anything vaguely resembling a coup attempt, in the emirate of Shardjah. The rest of the emirates, including Abu Dhabi, were unmoved by the conspirators, and the revolt was put down without any casualties and without even suitable punishment for the instigators.

This federal structure, in which each emirate except Abu Dhabi felt uncomfortable soliciting funds from the treasury of the Al Nahyan family emirs, encouraged the emirates not just to make use of the wealth literally flowing under the camels' hooves in Abu Dhabi, but to develop their own economies, as independent as possible from the oil price. The leader of this movement was Dubai, the emirate with the second largest oil and gas reserves. Led by the Al Maktoum family, which was no less respected than the Al Nayhans, Dubai was capable of financing its own economic growth and aspired to compete with its "big brother." Naturally, the Al Nahyan family could not resist taking up the challenge, and with some delay Abu Dhabi gave chase to Dubai.

Geographically and historically, the emirates are isolated from the region's cultural and religious centers. Unlike Saudi Arabia, they have not been able to rely on the flow of pilgrims and income from religious activities; besides, being the descendants of nomadic pirates, they were not inclined toward religious sentiments, and while being observant Muslims, they have not lost a healthy dose of pragmatism.[1]

The small territory and population of the country finds itself in an unpredictable situation between two rival poles of the Islamic world: namely, Shiite Iran—which immediately after the withdrawal of British troops from the emirates occupied islands in the Strait of Hormuz belonging to the emirates—and Sunni Saudi Arabia. This gave rise to the formation of an economic policy that was open and based on ties with the non-Islamic world. This policy was aimed at creating economic and political interests for world leaders on its territory (in the form of investment, important transit opportunities,

a stable trade corridor, significant benefits from the tax-free status of local offices, and so on) so that if needed, major developed countries would intervene to defend these interests.

It is difficult to say whether this decision was the personal choice Sheikh Zayed Nahyan and Rashid al-Maktoum, or whether the sheikhs were forced to follow this route after a more traditional choice in favor of an alliance with regional powers did not bring about the desired results: attempts to create strong alliances with Egypt and Syria did not succeed.

This strategy was not fully defined until the late 1980s and early 1990s, when it got an unexpected boost after the emirates found themselves on the front lines after the Iraqi occupation of Kuwait. The sharp decline of tourists in the nascent tourism industry, the departure of a large number of Europeans due to the threat of war, and withdrawals of up to 40 percent of deposits from UAE banks drove the economy, which had only just begun to grow again after stagnating during the Iran–Iraq War, back into recession. The government was even forced to threaten to prosecute traders for hiking food prices. On the line was the country's survival in every sense: at $35 per barrel, oil did not provide sufficient funds for the formation of the defense budget necessary to respond to the growing threat.

The United Arab Emirates swiftly refined their position, unequivocally and irrevocably siding with the West. The government, which until then had held a critical position on Israel,[2] suddenly declared the leader of the Palestinian Authority, Yasser Arafat, persona non grata, and deported over 500 Palestinian activists and arrested another 400.

The Emirates, formerly a consistent critic of the United States, also radically changed their rhetoric on this issue. The UAE joined and provided financial support for the anti-Iraqi coalition and entered the role of a reliable partner of the West. The UAE gave many guarantees, and not only of political cooperation. It also promised to observe the economic interests of developed countries and corporations, adhere to a British-style legal system, accede to international trade organizations, remove customs barriers, and improve investment legislation.

The active role of the UAE in attracting new coalition partners (including India, Pakistan, and Bangladesh), its active assistance in the evacuation of refugees, its actions to ensure the functioning of trade and passenger routes at a time when the main carriers had suspended their operations,[3] and its doubling of OPEC oil production quotas to support the market were all factors that ultimately enabled the country to become a privileged partner, a key trade intermediary, and a financial center not only in the Gulf region, but throughout the world, from Indochina and Australia all the way to the United Kingdom.

Eventually, the country's catastrophically small population and its citizens' unwillingness to be involved in the country's rapid modernization process raised the question of the import of labor. However, instead of creating the usual barriers, the UAE authorities, once again adopting full

openness to the country's integration into the global market, created a system that facilitated labor migration. At the same time, a unique system was developed to protect the native population from being eroded or displaced.

This system was in place by the late 1980s, and by the end of the 1990s, almost 92 percent of the labor force consisted of foreigners. As a result, only 15 percent of the country's population are actually UAE nationals. The country has gained the benefits of industrial and service sectors that have low operation costs and added costs, but high efficiency and production quality, leading to high value-added in services. In the United Arab Emirates, labor costs account for just 27 percent of GDP (in Mexico that figure is 35 percent, and in the United States it is 55 percent), making them some of the lowest in the world, and yet the quality of products and the level of technological advancement of the country are beyond question.

A PATH TOWARD DIVERSIFICATION

The strategic vision of developing a highly diversified economy has been both officially and tangibly inherent to the management of the Emirates from the very beginning of the country's existence. The strategy to achieve this goal has not changed. In short, it can be described in five theses.

1. Full control of revenues from resource exports combined with maximum production efficiency, and professional management of reserves both on the global markets and domestically

The UAE controls all the mineral resources in its territory. Hydrocarbon processing and exports, and mining and metals processing, are carried out in accordance with agreements and under the control of state-owned oil companies. Most of the production is done by companies in which 60 percent belongs to the state and the remaining 40 percent is owned by leading global companies. This ensures access to the latest technology and efficient management and inclusion in the global system of processing and selling hydrocarbons.

State-owned companies also own 60 to 100 percent in related businesses, including exploration, drilling, transportation, and processing at different levels. At the same time, oil and gas companies pay corporate income tax of 55 to 85 percent (depending on the type of production), meaning the state's effective share of income from hydrocarbon production is at least 87.5 percent and on average close to 92 percent.

The state surplus accumulates in the form of investment in a network of state investment funds, companies, and banks. The investment funds have a broad mandate, investing in twelve different asset classes around the world, acquiring both liquid securities and large and controlling shares in

corporations. Precise data on the volume of money managed by funds is not available (though it is at least $1.2 trillion), but there are indications that this investment activity is highly successful: the long-term income from funds is on average 6.5 percent a year in U.S. dollars.

2. A high standard of living and, accordingly, high level of consumption, achieved via subsidies

The social economic policy in the Emirates is to eschew the main types of individual and corporate taxation and to regulate prices for large groups of goods in order to avoid price increases due to rising incomes.

In the UAE, income tax and value-added tax are zero, while the tax rate on corporate income ranges from zero to 55 percent, depending on income levels. In practice, non-zero rates apply only to foreign banks and oil companies. Together with a small tax levied on rental payments, the tax burden on businesses in the UAE is approximately 15.9 percent of profit (far less once banks and oil companies are taken out of the equation).

But the tax exemptions, which allow companies to generously share extra profits with locals (and much less generously with migrant workers), are only part of the social contract. The second part is large-scale subsidies, especially on energy and fuel, and tight control over prices. In 2013, nearly 5 percent of GDP was spent on subsidies on energy and transport fuel.

The Ministry of Health sets the prices of about 8,000 medicines; electricity and water are sold at minimum costs, and the prices for a large number of consumer goods are rigidly controlled. These controls were passed into law on September 23, 2008. UAE authorities essentially have the right to set recommended prices, and retailers must get the prices they set for their products approved by a special committee. Approval may be withdrawn if the committee considers that circumstances have changed.

3. Centralized massive investments in the development of non-hydrocarbon businesses

In 2013, manufacturing accounted for 56.7 percent of the GDP of the Emirates, and the share of the labor force involved in it exceeded 37 percent. In the first fifteen years of this century, the annual volume of investment in fixed assets of the manufacturing sector quadrupled. A stable 8 percent of GDP is used as capital for construction, and the share of employment in this sector of the economy exceeds 25 percent of the workforce.

The value of large infrastructure projects under construction in the UAE, including nuclear power plants, airports, railways, aluminum plants, oil refineries, and subways, is more than $104 billion. The total value of *all* large infrastructure projects currently under construction is, according to

official estimates, more than $727 billion (with an average construction time of seven years, that is more than 30 percent of GDP). About one-third of the total construction is housing, one third is industrial, and a third is cultural, health, and education facilities. Projects linked to the Dubai Expo 2020 alone have an estimated combined cost of $8 billion.

During the 1990s, the UAE actively developed its financial and banking sector (accounting for 8 percent of the GDP, much like in the United States). At present, forty-nine banks operate in the UAE (twenty-six of them foreign) with more than $650 billion in assets.

Transport and logistics accounts for 6.4 percent of GDP and employs almost 8 percent of the labor force. In the mid-1990s, the United Arab Emirates became one of the world's largest transport and logistics hubs. Two of the largest airlines in the world (ranked No. 3 and No. 4 in terms of passenger numbers) belong to the UAE. Dubai International is the world's largest airport in terms of foreign passenger traffic, sixth in overall passenger traffic, and third in volume of cargo transported, and brings in about 27 percent of Dubai's GDP. According to official projections, by 2030, the airport business in Dubai will bring in more than 44 percent of the country's GDP, creating nearly $90 billion of added value per year. There is also a second major airport (in addition to Dubai International) in Abu Dhabi, and a third (still under construction) will be even larger.

The country's airlines are an interesting example of how successful state-owned businesses can be. Emirates and Etihad Airways, which together own a fleet of almost 370 aircraft, employ different strategies,[4] but both show consistently growing profits, in total now exceeding $2 billion per year. Their main competitive advantage, in addition to effective management, is low operation costs with unlimited investment opportunities provided to shareholders, which allows them to grow at a double-digit annual pace.

In addition to air travel, the UAE has extensively developed maritime transportation, with over fifteen commercial ports, including container terminals, oil terminals, and industrial and fishing sectors. UAE's commercial fleet consists of 306 ships.

Tourism makes up more than 4 percent of the UAE's GDP, and when business travelers are included, that figure rises to 8.4 percent: more than the financial sector contributes to the GDP. More than 4 million tourists visit the country a year, and the UAE's tourism sector is rated 24th in the world in terms of efficiency, according to the Travel and Tourism Competitiveness Report 2015.

4. Direct and indirect subsidies for the activities of public and private companies through public funding, waivers, or limiting income tax rates

Just like individuals, corporations in the UAE pay close to zero taxes, the effects of which have already been described in the context of airlines.

Financing for most corporations in the country comes through public funds; the cost of financing is equal to zero. Bank financing of businesses (through loans) amounts to about 95 percent of GDP. The refinancing rate is 1.5 percent; for reference, the food inflation rate is 1.7 percent. Loan rates vary greatly depending on the type of borrower and other conditions, though on average they range from 3 to 6 percent annually. The consumer price index in 2015 was about 3.5 percent. Real loan rates hover around zero, while the refinancing rate subsidy exceeds 1.5 percentage points.

Some industries, such as agriculture, have significant benefits and are subsidized through special programs. Land is allocated free of charge for agricultural purposes without any restrictions to any citizen of the United Arab Emirates, and any land preparation required for such business—such as leveling and fertilizing the ground, bore-hole drilling, or building wells—is carried out at the state's expense. Raw materials such as seeds, fertilizers, and insecticides are subsidized by about 50 percent of the cost, and for almost any additional expenses, interest-free loans are available. Last but not least, the state guarantees to buy 100 percent of the final product from farmers at a profitable price, regardless of global market prices.

5. Maximum reduction of barriers to international trade, capital, and labor, and in the perceived risk of doing business

The UAE has no export taxes, tariffs, and duties.[5] The country is part of PAFTA, the Pan-Arab Free Trade Area created in 1997 by eighteen countries in the region, and since January 1, 2005 it has not charged import duties on any goods made in PAFTA member states.

Customs duties on the vast majority of goods from other countries are zero, or at most 15 percent. Non-halal products such as pork, alcohol, and tobacco can be taxed up to 200 percent, which brings the average tax up to 14.3 percent. The exception to this rule is the emirate of Sharjah, which charges 5 percent customs duties on all goods, though this is largely a formality, since it is not possible to control the movement of goods within the Emirates.

Ironically, given the huge influence of the state in the economy, the United Arab Emirates have long had very high marks for freedom of competition. In a 2015 report by the World Economic Forum, the UAE received significantly higher scores for both "density of the local competition" and "lack of barriers to trade" than not only neighboring countries, but also Chile, Mexico, Indonesia, and even Norway. In 2014, the Emirates placed 16th in the world on the enabling trade index and was in first place for the availability and quality of transport infrastructure. The same World Economic Forum report estimates that UAE customs procedures are the third most simple and efficient of 140 countries. The Logistics Performance Index compiled by the World Bank ranks the UAE 20th in the world.

A key role in the development of business in the UAE is played by special economic zones. The first zone was created at the turn of the twenty-first century. Unlike in the rest of the country, where 51 percent of a company must be owned by UAE nationals, at least 25 percent of the employees must be local, and land and property may only belong to UAE nationals, in these special economic zones, 100 percent foreign ownership of companies is allowed.

Residents of the special economic zones do not pay any customs duties, they can carry out unlimited foreign currency exchange operations, and licensing is greatly simplified or abolished, as is the need to follow the local legislation and other local regulations. Resident companies can only work within these zones or outside the United Arab Emirates, but sales and other business operations can be carried out in the rest of the UAE via local companies. Goods and services can, however, be purchased directly everywhere in the UAE.

Unlike in the rest of the country, there is no Internet censorship inside these zones. Crucially, the state guarantees these benefits for fifty years for businesses that become residents of the special economic zones.

There are currently about forty such zones in the United Arab Emirates, including the Dubai Creative Cluster; the Dubai International Financial Center; the Dubai Multi Commodities Center with 8,000 companies mainly trading in precious stones, metals,[6] and tea; the Dubai Industrial Zone; and the Khalifa Industrial Zone in Abu Dhabi, which according to the authorities will be the largest industrial area in the world after 2018.

The most famous is the Jebel Ali Free Zone, which has 6,000 registered companies from eighty countries, including Fortune 500 companies. More than two-thirds of non-oil goods and services in the UAE and about 80 percent of non-oil exports are made in special zones.

FAR FROM SUCCESS

Nevertheless, the situation in the UAE is far from idyllic. In terms of the spectrum of industries, as well as revenues, the United Arab Emirates are still undeniably resource-dependent. In 2013, 33 percent of the country's exports were hydrocarbons.

In 1998, when oil prices were substantially lower, hydrocarbon production in the UAE accounted for 22 percent of GDP. By 2000, it was already 41 percent, and in 2013 it had dropped to 38.3 percent. In 2015, even after a dramatic fall in oil prices to levels close to those seen at the start of the century, hydrocarbons still accounted for 31 percent of the UAE's GDP. This is of course an improvement on 41 percent, but is still much higher than in many other resource-dependent countries that are not even aspiring to diversify.

Like other oil-dependent countries, the UAE's budget has turned out to be inflexible. In 2014, the budget deficit of the richest emirate, Abu Dhabi, exceeded 7 percent, and in 2015 it grew to 13 percent. In 2016, after clearly adapting to the new realities and stabilization of oil prices, the budget deficit is still more than 11 percent of GDP, and oil revenues still comprise up to 75 percent of total revenue. The deficit is balanced with money from sovereign wealth funds,[7] from the proceeds of public companies, and through the issuing of debt securities. The cost of borrowing is very low for the UAE, thanks to many years of working to reduce business risks and demonstrating consistency and transparency in economic policy.

Other consequences of the resource boom are even more serious. The excess availability of hydrocarbons and the active control of energy and electricity prices by the state have led to a disproportionate increase in the consumption of hydrocarbons on the domestic market. In 2008, the UAE became a net importer of gas, despite its huge domestic production. The UAE exports gas to Japan, North America, and Asia, but buys from Qatar. What will happen when Qatar increases its access to international markets is unclear, but it is unlikely that the UAE will be able to afford such consumption over time. Even now, the state is canceling subsidies for motor fuel due to a shortage of funds in the budget and moving over to the regulation of prices. This forced measure will inflict a blow on the customary system of sponsored consumption and will inevitably cause a decline in GDP, though it is not yet clear by how much.

The regulation of prices for a large range of goods has given rise to re-exportation on a large scale.[8] Re-exports, which accounted for 24 percent of total exports in 2014, create unproductive income and run the risk of a deficit if the economic situation deteriorates.

But the main indicator of the country's defeat in the fight for diversification away from the oil and gas sector is the state of labor productivity. For almost twenty-five years now, labor productivity (as well as total factor productivity) in the UAE has been consistently, albeit slowly, declining by about 0.1 to 0.5 percent per year. This was partly due to the gradual involvement of an increasing proportion of the labor force in non-productive sectors, especially the public sector (bureaucracy in the UAE has grown rapidly) and construction. The main factor, however, is UAE companies' use of benefits and subsidies in the competition against foreign producers, and a disregard for production costs.

Against this backdrop, during the last oil boom, domestic demand in the UAE has grown faster than GDP. This growth will be a very serious problem when the UAE budget starts to increase pressure on companies to pay higher taxes, leading them to dramatically reduce both labor and consumption. The country may find itself caught in an overproduction trap.

For a start, it is not clear why a country with a population of several million people is home to two large airlines, three major airports, fifteen ports, and two giant aluminum smelters. Moreover, there are serious doubts about the ability of producers to make a profit using gas purchased at global

prices. What will happen to the majority of companies in the country if the government has to introduce reasonable rates of profit tax and income tax? How will the government maintain the special zone areas, where there are guarantees of zero tax, if taxes increase across the country? This will clearly prompt a massive inflow of UAE companies to areas previously occupied solely by foreign companies. And if the legislation governing these zones is changed, how will the UAE be able to retain the trust of investors and businesses, and how will the country cope with a dramatic increase in loan rates and investment outflows?

The experience of the UAE is unique for many reasons, but it is also revealing. First, the UAE disproves a common misconception about resource economies: that the country's resources need to be protected from external economic and/or military aggression, and that the most effective protection is through self-isolation, the erection of barriers, increased weaponry, and ideological control that does not allow "enemies" to destroy the identity of the country and undermine the willingness of the population to engage in resource protection.

The UAE has managed to effectively retain full control over the country's resources while keeping markets, cultures, and borders as open as possible, making it possible to multiply the efficiency of resource exploitation. Moreover, this openness has not led to the erosion of local culture, customs, ruling systems, and ideologies.

A tolerant attitude to the outside world is sensibly combined in the UAE with traditionalism. The readiness to accept foreign workers, tourists, capital, and customs coexists with the strict division of people into nationals and non-nationals, while the creation of conditions for international business is accompanied by the building of rigid boundaries within which it can be done.

The economic history of the UAE is one of successful state companies that operate as efficiently as possible within the framework of opportunities available to them. Comparing the Abu Dhabi National Oil Company (ADNOC) with Russia's Gazprom and Rosneft, Emirates with Aeroflot, the National Bank of Abu Dhabi with VTB, or Mubadala Development Company with Russia's Bank for Development and Foreign Economic Affairs (Vnesheconombank) shows an enormous difference in efficiency.

It is likely that the key to this success is the low level of corruption in the UAE, as well as UAE companies' willingness to actively apply the experience of more successful competitors (including by recruiting successful international managers) and to strive to win leading positions on international markets.

But, of course, an important role in this success has been played by the policy of subsidizing state-owned companies through revenues from exported mineral resources, and by collecting reduced or no taxes (directly in the case of corporations, and indirectly in the case of individuals). Compared to

European tax rates, in one year, Emirates Airlines saves more than a $1 billion through the non-payment of income tax and employee taxes in the UAE.

This subsidizing puts the country's long-term success in jeopardy by creating a vicious circle. To talk seriously about diversifying revenues, it is vital to create tax flows from non-oil businesses. But the substitution of oil revenues in the UAE's budget would mean tripling existing non-oil tax revenues. Such an increase in the tax burden would undoubtedly have a very negative impact on corporations. Emirates would lose more than half of its profits, and Etihad would be unprofitable.

Developers would face a significant drop in the cost of real estate (due to the reduced purchasing power of consumers and the outflow of foreign residents once attracted by zero taxation) and an increase of about 30 percent in costs. In that situation, the volume of investment would be reduced substantially, and there is no guarantee that major Emirate corporations would remain as successful or even remain competitive on the tough international market.

The UAE is, however, a small country in terms of territory and population, and its oil and gas reserves—even at current prices—will enable the country to maintain a very decent level of income and budgets for many more years. They also mean that a diversification program is considered useful, but not vital. In this respect, the experience of the United Arab Emirates is not representative of larger countries with a lower proportion of oil and gas in their GDP and higher costs.

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NOTES

1. Eighty percent of the local population in the UAE is Sunni, and the state has adopted basic Sharia laws, ranging from the prohibition of gambling to a decade in prison for attempting to convert a Muslim to another religion.
2. Its position had included demanding that the Soviet Union ban the emigration of Jews from the USSR to Israel.
3. Emirates was the only airline that continued flights in the region, even in the last days of the war.
4. Emirates relies on wide-body aircraft, independence from alliances, and the development of its airport service, while Etihad focuses on the acquisition of shares in other airlines.
5. The exception is a charge of $60 per ton of exported ferrous scrap metal, which was introduced in 2004 but, as of 2015, had never yet been collected.
6. The UAE is the largest hub for gold trading in the region, through which 25 percent of the global turnover of gold passes.
7. The UAE's sovereign wealth funds hold more than $1 trillion in assets.
8. The UAE is the largest re-export hub for food products in the Gulf region.

Iran: The Fruits of Isolation

ALEXANDER ZOTIN

Forty years ago, Iran was one of the most dynamic economies in the world, and the most developed country in the region, with a per capita GDP that was higher than that of the Soviet Union and Turkey. Its industrialization, however, was ill conceived and ineffective, and indirectly led to the 1979 Islamic Revolution. The Iran-Iraq War that followed and international isolation have plunged the country into decades of decline.[1]

The Middle Eastern country of Iran has a population of 79.1 million people. The country's population growth rate between 1950 and 2015 was significantly above the world average at 2.35 percent, on average, per year (it fell sharply to 1.27 percent in 2010–2015), compared with the global growth rate of 1.66 percent (which fell to 1.18 percent in 2010–2015). Iran's population has a median age of 29.5 years, almost the same as the world average of 29.6 years.[2] Ethnically diverse, Iran is home to Persians (61 percent), Azerbaijanis (16 percent), Kurds (10 percent), Lurs (6 percent), Arabs (2 percent), Balochi (2 percent), and Turkmen and Turkic tribes (2 percent).[3] Iran is mainly Muslim (99.4 percent), and predominantly Shiite (90 to 95 percent), with Sunnis in the minority (5 to 10 percent).[4] The country's primary language is Farsi.

Iran's main source of wealth is hydrocarbons. According to BP, Iran contains nearly 10 percent of the world's proven oil reserves, at 160 billion barrels—the fourth largest reserves after Venezuela (300 billion barrels), Saudi Arabia (265 billion), and Canada (175 billion).[5] Commercial production of oil began in 1908, making Iran one of the world's oldest oil producers.

In terms of proven gas reserves, Iran is in first place, with 34 trillion cubic meters (18 percent of world reserves), followed by Russia (17 percent) and tiny Qatar (13 percent). Iran's geological conditions are excellent, and its deposits can be extracted easily and cheaply.

Oil accounts for 60 percent of Iran's total exports ($53 billion to $56 billion in 2013) and provides just under 50 percent of budget revenues; however, oil exports account for only $850 per capita per year, due to the large population of 79.1 million. For comparison, in the classical rent-based economy of Saudi Arabia, oil exports accounted for about $10,800 per capita a year in 2014 ($16,000 if migrant workers permanently living in the country are not included). In the ultra-rent-based economy of Qatar, oil and gas revenues are $70,300 per capita, or $455,000 if migrant workers are

not included. Iran is very similar to Russia, which had oil revenues of $2,400 per capita in 2014.[6] Before the introduction of the European embargo on Iranian oil in 2012, the level in Iran was almost the same.

According to the International Monetary Fund, Iran's GDP per capita in 2016 was about $5,200. This is similar to the Ukrainian level before the crisis, and considerably less than that of regional rival Turkey, where the GDP per capita is $9,300, or Russia, where GDP per capita has climbed to $8,000. Before the 1979 Islamic Revolution and the Iran-Iraq War, the GDP per capita in Iran was higher than in Turkey.[7]

THE WHITE REVOLUTION

Iran's modern history began in 1963, when Shah Mohammad Reza Pahlavi launched a program of radical economic and social reforms known as the White Revolution. The main economic policies centered on agrarian reform, the abandonment of a system analogue to serfdom, and rapid industrialization with funding from foreign capital.

The reform was financed with petrodollars. In 1960, Iran exported 1.7 million barrels per day of oil, while producing 1.8 million barrels per day (6.3 percent of world production). By 1970, exports had grown to 3.7 million barrels per day and production was at 3.8 million barrels per day (8.5 percent of world production). In 1962, oil and gas revenues made up about 40 percent of the budget. By 1973 it had reached 70 percent.[8]

As part of the agrarian reform program, the government purchased land from landowners at market prices and gave it to farmers at a price 30 percent below market value, with deferred payment for 25 years at almost zero percent interest. This scheme was financed by petrodollars. Under this program, 6 million to 7 million hectares of land were transferred (52 to 62 percent of the country's total area). Two million peasant families (9 million people, or about 40 percent of the population) ceased to be serfs. But only those who had previously worked the land were entitled to receive it. Landless peasants received nothing.[9]

This group left their villages and moved to the rapidly growing cities. Of those who received land, not all were able to adapt to the new conditions. The plots allocated were very small and could not always feed their owners. One million land parcels (45 percent of the total) were smaller than two hectares, meaning that together, they made up just 5 percent of all the land cultivated in the country.[10] Some of the new landowners, often those with smaller plots, preferred to sell their land and move to the cities. In 1966, 31 percent of the population was urban. By 1978 this group had grown to more than 50 percent. This increase was also facilitated by the country's drastic population growth: in 1956, Iran had a population of about 19 million people; by 1976 it was 34 million.[11]

Reforms and the influx of petrodollars led to high rates of development. In a short period of time, metallurgy, petrochemical, shipbuilding, and automotive industries were created (the latter reaching a capacity of 200,000 vehicles per year.) The share of industry in Iran's GDP increased from 27 percent to 72 percent. The country became the world's 14th biggest economy (currently it is the 29th), and the Shah set the goal of reaching the top five. Per capita GDP increased from $2,400 in 1962 to $6,700 in 1976 (in Geary-Khamis dollars at 1990 rates).[12] This was slightly higher than the Soviet Union at the time, twice as high as South Korea, and eight times more than China, though this is a GDP per capita peak that Iran has been unable to surpass to this day.

The high growth rates had many side effects: disparities in regional development, a sharp rise in inequality, and corruption and inefficiency in spending. The reforms led to the emergence of opposition groups that sought to preserve the old system.

In his book *Iran in the '60s–'80s: Traditionalism versus Modernity. Revolution and Counter-Revolution*, the Middle East scholar Leonid Sklyarov cites as an example of this dichotomy how the development of the petrochemical industry and the production of plastic utensils undermined the traditional pottery industry. The construction of three major shoe factories virtually eradicated the rural shoemaking industry. The development of metallurgy affected the woodworking industry because wooden furniture (especially for clerical purposes), door and window frames, scaffolding, and utensils were replaced with metal.[13] Close-knit communities and unions of craftsmen and bazaar vendors rebelled against the Shah.

"There was only one way to prevent the ruin of traditional small businesses: by stopping the production of manufactured goods that were competing with handicraft products. But it was obvious that this was a road to nowhere," writes Sklyarov.[14]

The Shah did not take this road. He resorted to force to quell the resistance of the feudal landlords, who were dissatisfied with the partial confiscation of their land for the benefit of the peasants. He also dispersed the parliament, relying on the support of the West and oil revenues to begin industrialization.

The Shah did not take into account that the level of education of migrants from the countryside was extremely low, and educational programs were dramatically underfunded. As a result, these migrants were not in demand in the new industries. Foreigners were used to supplement the shortage of personnel. As a consequence, there was lumpenization of the urban population: they became disaffected and cut off from society and turned to the clergy. This group had been most strongly affected by the reforms. In the course of the agrarian reforms, *waqf* land (an inalienable charitable endowment under Islamic law, which typically involves donating a building, plot of land, or other assets) was reduced, and annual state subsidies to the clergy were abolished in 1978.[15]

The ultra-liberal principles of public life also elicited hatred of clerics. The Shah was building a secular state, with a focus on Iran's Zoroastrian past. This could not help but irritate the mullahs, especially since in Shiite Islam (as opposed to Sunni Islam) the monarch is not considered sacred. Women gained the right to vote, and secular education and judicial reform also undermined the position of the clergy. The response was a new revolution: an Islamic one.

THE ISLAMIC REVOLUTION

The White Revolution failed. Modernization was too rapid: reforms did not take into account the national and religious peculiarities of Iran and were met with resistance from merchants and the clergy. A significant proportion of migrants from villages were influenced by their political agitation.

Large oil revenues also played a negative role. As a result of higher oil prices from 1973 to 1978, the Iranian treasury received more than $100 billion, of which a considerable part was spent on the security services and the army (30 percent of budget spending in 1970).[16] The same amount was also spent on poorly designed industrial megaprojects. For the army, the government bought new equipment, mainly from the United States, including fighter aircraft. The famous Mercedes Gelandewagen model was developed at the request of the Shah for the army. After the Islamic Revolution, the auto giant had to come up with a marketing campaign to sell military vehicles to the public.[17] In 1972 alone, the Shah bought $3 billion worth of U.S. arms.[18]

Armed with funds from the sale of oil and a powerful repressive apparatus built around the SAVAK intelligence agency, the Shah ignored the opposition forces. Instead of seeking compromise, the Shah opted for total suppression.[19]

The standoff between the Shah, SAVAK, and the army, on one side, and the clergy, the merchants, leftists, other opposition, plus the urban poor, on the other, led to numerous anti-government demonstrations that began on January 8, 1978 in Iran's theological capital, Qom. Throughout the year, the clergy organized demonstrations in different cities and the Shah's Guard dispersed them. During almost every demonstration, people were killed, which turned into a self-perpetuating cycle. Commemorations for the first victims forty days after their deaths led to new demonstrations with new victims and new commemorations, riots, and strikes.

In September 1978, the Shah imposed martial law in an attempt to reverse the situation, but it was futile. The United States refused to support the regime and the gravely ill Shah lost control of the situation in January 1979. He fled the country, leaving the Prime Minister Shapour Bakhtiar in power.[20]

In February 1979, after a fifteen-year exile in France, the prominent political émigré and clergy leader Ayatollah Ruhollah Khomeini returned to Iran at the invitation of Bakhtiar. Amid jubilant crowds, he quickly seized power.

The White Revolution was replaced by an Islamic one. A referendum was held that resulted in the proclamation of the Islamic Republic of Iran. In December 1979, a new constitution was adopted, under which supreme power belonged to the clergy, embodied by the Rahbar (Supreme Leader) Imam Khomeini, and after his death, by his successor, Ali Khamenei, who has ruled since 1989. Civil power was to be exercised by the president and the Majlis (council)—which is, however, controlled by clerics. Judicial power, too, was given over entirely to the clergy. Islamic norms were imposed on the entire public sphere.

Khomeini considered economic issues to be secondary. "In the material schools of thought, economy is an end in itself; consequently, at different stages of growth, economy becomes an element of destruction, decadence, and ruin. But in Islam, the economy is a means that is not expected to do anything except better facilitate reaching the goal," Iran's Constitution states.[21]

It is not clear whether Khomeini's regime would have survived had it not been for the war with Iraq, which started in September 1980 when Iraq invaded Iran amid fears that Khomeini was attempting to spread his Islamic Revolution beyond Iran. This allowed the Islamists to not only deploy massive repression against supporters of the Shah and other opposition groups, but also to declare them accomplices of Saddam Hussein.

Two years after the revolution, President Abolhasan Banisadr outlined some of the results achieved by the new authorities: the main types of industrial and agricultural production had fallen by 30 to 50 percent, inflation had risen by 30 to 35 percent per year, and foreign exchange reserves had fallen by 60 percent. In 1982, 230 companies belonging to Iranian oligarchs were nationalized, accounting for about 80 percent of all industry. Only small firms remained in private hands. The multitude of private companies set up under the Shah were transformed into special funds, essentially holdings managed and controlled by the state (the mullahs) in the interests of the relatives of martyrs, for example. They are closely linked to private companies through which they place orders. This system is known as the *shibhedaulatiha*, the semi-public sector.

The industries built under the Shah stagnated under the new regime. The automotive industry, with production capacity of 200,000 cars a year, was almost idle through the 1980s, and even by the end of the 1990s was only producing 120,000 cars a year.[22] The shipbuilding industry launched under the Shah practically stopped operating, though other industrial and infrastructure facilities built under the Shah, such as roads and hydroelectric plants, continued to operate.

Iran's foreign policy also changed dramatically. The United States was declared an archenemy, and Israel was destined for destruction. The godlessness of the Soviet Union was also cause for disapproval. On November 4, 1979, employees of the U.S. Embassy were taken hostage. The United States responded by freezing Iranian assets worth about $11 billion. The sanctions included a

complete ban on U.S. citizens and companies doing business in Iran, and a ban on joint ventures with Iranian companies.

"ISOLATION IS ONE OF OUR GREATEST BLESSINGS"

Iran was internationally isolated, and Khomeini declared that "isolation is one of our greatest blessings." By 1988, the GDP per capita fell to $3,300, less than half of the 1976 peak reached under the Shah.

The strengthened Khomeini regime ended the 1980–1988 war with Iraq in a stalemate. Iran lost more than 200,000 soldiers in the conflict, even though after the war the borders of both sides remained virtually unchanged. During the following decade, little changed in the economy, as the oil market crisis coincided with Iran's course of international isolation, which acted as insulation during this period.

Hopes for reform came in 1997, when Mohammad Khatami, a moderate reformer, was elected president and held the second most important state post until 2005. (Khomeini died in 1989 and was succeeded as Rahbar by Ali Khamenei.) However, Khatami was replaced by the radical Mahmoud Ahmadinejad, and Iran entered into a new conflict with the West.

OIL AND SANCTIONS

Under Ahmadinejad's presidency, the main factor influencing the economy was international sanctions. These were imposed when Tehran's nuclear research threatened the Treaty on the Non-Proliferation of Nuclear Weapons of 1968. The UN Security Council passed a resolution in 2006 expanding the U.S. sanctions that had been imposed in 1979. Two more United Nations resolutions followed in December 2006 and March 2007. The sanctions limited the delivery of materials and technologies for the nuclear program, as well as the assets of individuals and companies associated with it.

Sanctions were gradually increased. In 2010, after Iran increased its uranium enrichment level above 20 percent, the Security Council recommended that countries "exercise vigilance" in transactions with Iranian banks. They also targeted the petrochemical industry.

UN resolutions translated into concrete measures developed by individual countries. In the United States, almost any economic activity between American and Iranian parties was de jure very strongly limited and de facto prohibited. The United States also put forward requirements for third countries that had economic relations with Iran, forbidding them (with a few exceptions) from re-exporting U.S. goods to Iran, investing in oil-processing, or providing Iran with financial services.

The European Union's decision to halt Iranian oil imports in July 2012 and prohibit their companies from insuring tankers exporting oil from Iran hit the isolated nation hard.

After the imposition of the embargo on Iranian oil by the European Union, exports fell by almost half, from 2.4 million to 1.3 million barrels per day. The EU had received about 34 percent of Iranian oil exports, though for the EU, that was not a significant proportion: in 2010, just 5.4 percent of all oil imports to the EU came from Iran. By 2011, that figure was 4.4 percent, as the main suppliers of oil to the EU—Russia, Norway, and, until 2011, Libya—increased their share of the market.[23] In monetary terms, Iran's revenues from oil exports declined from $118 billion in 2011 to $53 billion to $56 billion in 2013. The largest remaining clients for Iranian oil—China, South Korea, and India—took advantage of the situation and demanded discounts.

In addition to oil sanctions, the West imposed financial sanctions. Working with Western banks before Iran's access to SWIFT (the Society for Worldwide Interbank Financial Telecommunication) was cut off, Iranians were dependent on intermediary banks from other countries. When Iran lost access to SWIFT, these channels gradually became more and more limited, and external transactions were carried out in cash or by barter. Keeping dollar or euro deposits after being disconnected from SWIFT was not allowed, but the government did not restrict the cash currency turnover. Due to the high inflation caused by sanctions, which at its peak reached 45 percent year on year in October 2012, there was a great demand for gold coins, as other savings mechanisms were not enough.

Oil export restrictions did reduce the economy's dependence on oil rent to some extent. The proportion of GDP from oil exports fell in 2015 to 73 percent[24] from an average postwar level of 78 percent,[25] and the share of oil and gas revenues in the budget fell from more than 60 percent in the early 2000s[26] to 30 percent in 2015.[27]

Nevertheless, reducing dependence on oil revenues was accompanied by a sharp drop in GDP, from 6.6 percent in 2012 to 1.9 percent in 2013, with a small rebound of 4.3 percent in 2014. That growth in 2014 turned out to be unstable, however. Due to falling oil prices, GDP growth was replaced by stagnation, and in 2015 GDP grew by just 0.4 percent. Per capita, GDP fell by about 0.6 percent because of population growth of 1.3 percent. The budget deficit increased from 1.2 percent of GDP in 2014 to 1.7 percent in 2015, while the non-oil budget deficit fell from 8.2 percent to 7.2 percent of the non-oil GDP.[28] Iran's current account balance had been moderately positive since the mid-1990s. The fall in oil prices led to its decrease to 2 percent of GDP.

The closed nature of the Iranian economy has forced Iran to rely on its own industry. Automakers in Iran, who had stagnated in the 1980 and 1990s, were able to dramatically increase production in the following two decades, and the country now produces about one million cars per year.[29] Increased cement production in recent years has made Iran the seventh largest producer in the world, with

about 65 million tons per year.[30] Iran is the world's 14th biggest steel producer, with 16.1 million tons produced in 2015.[31]

However, Iran's regional rival, Turkey, ranks ahead of Iran in many metrics, including car production, with 1.35 million cars produced a year, cement production of 77 million tons per year, and steel production of 31.5 million tons. In addition, Iran's industry is focused almost exclusively on domestic demand and is uncompetitive on the world market. Iran's exports are not diversified, and oil continues to dominate. Exports remain relatively low-tech, although they have become a little more complex since the rule of the Shah. According to the Economic Complexity Index, calculated by MIT based on a country's exports, Iran rose in the ranking from 94th place in a sample of 102 countries in 1974 to 65th place out of 140 countries in 2015.[32]

Despite aggressive rhetoric against its neighbors, especially Israel, and support for Shiite groups fighting in Syria and Yemen, spending on the military in Iran is relatively low. From 1988 to 2015, defense spending averaged just 2.9 percent of GDP per year. In 2015, Iran spent $131 per capita on the army, or the equivalent of 2.5 percent of GDP, which is only slightly higher than the world average of 2.3 percent. This contrasts sharply with both the record of spending on the army under the Shah, which was about 30 percent of budget expenditures, or equivalent to 10 percent of GDP in the 1960s to 1970s,[33] and the current expenditure of Iran's main regional rivals, Saudi Arabia and the other Arab Gulf monarchies.

The standoff between Saudi Arabia and Iran escalates periodically. One of the most recent episodes was the punishment and execution of the Shiite preacher Nimrah al-Nimrah by Saudi Arabia in January 2016. His death prompted numerous protests in Iran and an attack on the Saudi embassy in Tehran. In response to the embassy attack, Saudi Arabia broke off diplomatic relations with Iran.

AFTER SANCTIONS

The victory of the pragmatist Hassan Rouhani in the 2014 presidential election facilitated the improvement of relations with the West and the lifting of sanctions, as the president of Iran is responsible for the country's foreign policy.

Iranian Oil Minister Bijan Namdar Zanganeh said that after the removal of sanctions, Iran would immediately increase production by 0.5 million barrels per day, progressing up to an extra one million barrels per day over the course of the year. By the winter of 2016, Iran had achieved the current production levels of 3.7 million barrels per day. To increase production by an additional 2 million to 3 million barrels per day, Iran would need the help of Western companies, who left Iran in 2010–2012, in particular the European companies Total, Eni, Repsol, BP, and Shell. Some have already announced their intention to return to Iran.

A number of non-oil companies have also decided to participate in the post-sanctions re-industrialization of Iran. The Italian company Finmeccanica has signed a contract worth 500 million euros to build an electric power plant in Bandar Abbas, and Iran's largest carmaker, Iran Khodro, is in talks with Peugeot, Daimler, and Volkswagen over licensed car production. Iran has also signed a contract for the purchase of seventeen Airbus aircraft.[34]

The lifting of sanctions has had a positive impact on economic growth, though the increase in oil production is partly offset by low oil prices. The IMF forecasts that Iran's GDP would grow in 2016 by 4.5 percent and by 4 percent in 2017. This growth is, however, linked to increased oil and gas revenues following the end of sanctions. The IMF forecasts their share in the budget will increase to 34 to 36 percent.[35]

The economic development of Iran has been delayed by a number of adverse factors in the last fifty years. Oil and gas rents were used by Shah Reza Pahlavi to finance ill-conceived and forced modernization, which become a catalyst for dissent in society and led to the Islamic Revolution. The period after Khomeini came to power was marked by harsh repression in the country, a bloody war with Iraq, and a slump in the economy. At the beginning of the twenty-first century, further sanctions had a serious negative impact on Iran's economic development, and only after the removal of the key sanctions in 2016 has the country had a chance to develop.

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Nigeria's Forty Lost Years

VLADIMIR GRIGORYEV

After gaining independence from Britain, Nigeria—stitched together from three different regions—experienced a sharp growth in oil and gas revenues, which led to a civil war, the degradation of agriculture, and the preservation of inequality along with a low standard of living for the next forty years. In the twenty-first century, the country was able to wean itself off its dependence on oil, but the consequences of it are still evident in Nigeria's low level of energy efficiency, high level of corruption, and oil-based budget.

Nigeria is a West African country with a population of 188.9 million people, making it the most populous country in Africa and the seventh most populous in the world. Nigeria's population growth between 1960 and 2015 was much higher than the world average, with an annual average of 2.5 percent (2.7 percent in 2010–2015) compared with the global rate of 1.66 percent (1.18 percent in 2010–2015). The population is young, with a median age of 18, substantially lower than the world average of 29.6 years.[1] There are more than 500 ethnic groups in Nigeria,[2] the largest of which are the Hausa, Fulani, Yoruba, and Ibo groups. Nigeria's state language is English and its major religions are Islam and Christianity.

The formation of a resource-based economy coincided with Nigeria's attainment of independence in 1960. At that time, the foundation of the economy was still agriculture. The former British colony was the world's largest producer of peanuts, the second largest exporter of cocoa beans and palm oil, and one of the leading manufacturers of cotton and rubber. Agricultural goods accounted for about 70 percent of exports, but this did not prevent Nigeria from remaining self-sufficient: the import of food products for mass consumption was minimal. Two-thirds of the country's population was employed in agriculture.[3]

Nigeria's oil fields were opened in the 1950s, and by 1960 were producing a modest 20,000 barrels a day. Over time, the main operator, Royal Dutch Shell, began to see fierce competition from other international oil companies (including Gulf, Agip, Tenneco, and Phillips) that at various stages were paying 40 to 60 percent of their profits from the country to the Nigerian government.

The first oil boom in Nigeria was caused, contrary to popular belief, not by price growth in the 1970s, but by the expansion of production and the discovery of new oil fields in 1964–1965. This

caused production to quadruple, from 75,000 to 80,000 to 300,000 barrels a day. The growth of individual incomes in one of the regions caused controversy about how the rent should be distributed and dramatically increased the importance of the central authorities, who ultimately decided on the distribution policy.

Colonial-era Nigeria was formed by the British from three large but very different regions, delineated by two main characteristics: ethnicity and religion. In the north, the Hausa and Fulani tribes were primarily Muslim. The southwestern provinces, known simply as the west, were dominated by the Yoruba tribe. In the southeastern part, known as the east, the Christianized Ibo ethnic group was in power.

The public financing system, which had been established when the economy was led by agriculture—which was equally developed in all three regions—consisted of transferring 50 percent of the proceeds from exports from a given province to the regional government, while another 20 percent was transferred to the federal government and the rest was distributed among the other regions.

This system stopped working once the economy became dominated by oil. In the mid-1960s, 80 percent of all the oil came from the east, whose rapidly growing income was a source of discontent for the northern regions that were wary of the growing imbalance in regional incomes. At the same time, there was growing tension between the eastern and central provinces over the location of processing industries. In the eastern provinces, a media campaign gained momentum against planned federal government changes to the tax system, which were set to increase taxes on oil companies but were interpreted as a predatory attempt by the federal government to take income away from the regions.[4]

In 1966, two military coups occurred. First a group of Ibo officers came to power in the capital, but they were quickly overthrown by a representative from the north, Lieutenant-Colonel Yakubu Gowon.

A year later, the oil-rich east, against the backdrop of an attack against the north and against the Ibo ethnic group, declared the formation of the independent state of Biafra, which led to a full-scale civil war that lasted until 1970.

The outcome of the war was the defeat of the separatists and a new law on the distribution of oil rents. Now the region's share of revenues decreased to 45 percent, and the redistributive pool was 50 percent (instead of 30 percent), which was an obvious improvement for the north. In 1969, during the war, the famous oil decree was issued declaring that hydrocarbons were the property of the nation—or, in other words, under the purview of the powers of the central government.

Under another reform enacted in 1971, revenues from offshore production went directly to the federal government.[5] The laws governing rent redistribution changed several more times to favor the federal center right up until the 1990s. The nationalization of mineral resources and the concentration of

commodity revenues—a tactical decision aimed at preventing separatism and encouraging loyalty to the federal center—also led to chronic state budget dependence on petrodollars.

In 1971, Nigeria joined OPEC. Following the example of other oil-exporting countries, in 1977 the government decided to merge the Ministry of Natural Resources and the national oil company, establishing the Nigerian National Petroleum Corporation (NNPC). This combined regulatory functions and operations, allowing a single institution to grant extraction permits and independently participate in the creation of joint ventures with foreign operators.

The oil boom of the 1970s only increased the dependence of the budget on hydrocarbons. In 1970, the share of oil in total exports was just under 60 percent (during the civil war, active development and production continued at the top of the River Niger, where there was no threat of military clashes). In 1974, the proportion of oil in exports exceeded 90 percent, and from then on remained above 80 percent.[6] Oil revenues accounted for 54 percent of GDP in 1979, but that figure did not grow until 1993, when it increased to 62 percent.

Nigeria's budget has grown to an unprecedented size. Between 1970 and 2005, the Nigerian government earned about $390 billion.[7] In 1972, 62 percent of the budget came from oil revenues. Two years later that figure was 88 percent,[8] and to this day the proportion of oil revenues in the budget has not fallen below 59 percent.[9]

INEFFICIENT INVESTMENTS

The increase in oil revenues, along with state investment in industry, led to growth in production capacity. However, this process was accompanied by a fall in capacity utilization and productivity of the economy. Government plans for industrialization, which were supposed to create the conditions for inclusive growth and rising living standards, did not lead to the desired result in the first forty years of independence.

The wealthy government used the flow of petrodollars to finance large industrial projects and infrastructure construction. In periods of high oil prices, the state spent an average of 10 to 15 percent of GDP as investment capital. But among all the countries covered in this report except Azerbaijan, this is the lowest index, even in absolute terms.

Moreover, from the mid-1970s there was a constant fall in capacity utilization. In 1975, Nigeria consistently used 77 percent of its production capacity. Eight years later, that figure dropped to 50 percent, and in the 1990s, a record low of 35 percent was reached. A striking example is the steel complex in Ajaokuta, the largest in the country. Built in the 1970s, by the late 1990s it had still not made a single ton of steel. This unfortunately, shows how ill-conceived investments were and how high levels of corruption were, which severely impacted the quality of construction. In addition, most

of these projects on completion remained in the hands of the state, which was more focused on allocating and appropriating oil revenues than developing competitive production.

Nigeria has failed to set up sufficient oil refining facilities for the needs of the population, despite huge subsidies. Petroleum products became one of the main items of import and remain so today: since 2008, Nigeria has spent more than $7 billion a year on fuel.[10]

The increasing proportion of the oil and gas sector in GDP has caused high volatility in growth. During periods of high prices, such as in 1974, the economy grew by more than 10 percent. When prices were falling, the economy shrank at a comparable value: in 1986, for example, it fell by 8 percent. Despite real GDP growth almost doubling in the first forty years of independence, this period can be regarded as a truly lost opportunity. Per capita GDP in 2000 amounted to $1,304 (at the 2010 dollar rate), when in 1965 it had been $1,456. Oil simply replaced the added value produced by other sectors of the economy. In 2000, the proportion of oil revenues in per capita GDP was eight times more than in 1965.[11]

A TURNING POINT AND THE LEGACY OF RESOURCES

Despite the rapid development of telecommunication technologies and the high-tech sector, which enabled the country to shake off its dependence on oil, and despite partial democratization, a reduction in administrative pressure, and some liberalization, development in post-resource Nigeria faces a number of problems inherited from the period of the dominance of the oil sector.

The turning point came in the mid-1990s. Against the backdrop of public frustration with the federal government's policy, demand grew for the liberalization of the economy. Most people living in the Niger Delta favored the introduction of environmental standards for mining companies. Between 1970 and 2000 there were about 7,000 oil leaks, causing serious damage to local agriculture, for which compensation was extremely rare. Since 1958, the equivalent of 9 million to 13 million barrels of oil has leaked into the Niger River basin.[12] Delta residents have repeatedly organized anti-government demonstrations, feeling that despite the presence of vast underground wealth, their quality of life has not improved.

After the death of the leader of the military government, Sani Abacha, in 1999, elections were held and won by a representative of the Christian south, Olusegun Obasanjo. The government started to respond to public demands by changing the rent distribution system, reducing the share of oil and gas revenues sent to the federal government to 39 percent, and sending 15 percent directly to municipalities.

A crucial consensus was formed among political elites. The position of president was held alternately by a representative of the Christian (2008) and then the Muslim (2015) communities. Ministerial portfolios were equally distributed between the north, east, and west. According to the Polity IV

index of democratization, between 2000 and 2014, Nigeria did not become fully democratic but made great strides (it was given a score of four, which corresponds to a hybrid regime with prevailing democratic tendencies).[13]

In the 2000s, the agricultural sector began to grow dramatically. In 2001, the added value of the agricultural sector per capita was $266 (at 2010 dollar rates). By 2007, it had grown to $496. This growth continued after the fall in oil prices and through the general stagnation of the world economy due to the financial crisis of 2008. In 2015, it rose by 18 percent to $583.

This was partially due to the economic expansion of China on the African continent. Nigeria began the active cultivation of cassava and soon became its largest exporter, while China became its largest importer. In 2007–2009, China sent more than 100 agricultural specialists to Africa to assist in the creation of plans for agricultural development. In 2009, a delegation of Nigerian professionals was trained in China. The majority of China's investments were still, however, in oil and gas and construction.[14]

The development of the telecommunications sector in Nigeria is worthy of particular attention. Its contribution to GDP was measured by the consulting company McKinsey & Co, which compiled the iGDP index. If oil and gas are removed from the GDP, Internet technology generates 1.5 percent ($2 billion) of Nigeria's GDP, which corresponds to levels seen in Brazil and South Africa (the leader of this index is Sweden, at 6 percent).[15] At the same time, 75 percent of the iGDP index comes from individual use. The other 25 percent is government spending, making it the leader among African countries in terms of this index.

The production of affordable electronics has also been launched in Nigeria. For example, the company Veda and its partners have devised a program to provide students with inexpensive laptops assembled locally. The company Mi-Fone plans to start producing smartphones locally.

As this industry gains ground, more and more spaces are appearing for the development of high-tech businesses. The most successful ones are the Co-Creation Hub and Wennovation Hub.

Some digital products have even expanded onto the international market, such as the application Paga, which, with more than a million users, provides a variety of payment options via cell phones and the Internet.[16] Another example is the online retailer Jumia.com, created in Nigeria but operating in Egypt, Kenya, and Morocco. Nigeria has also seen the development of the iROKOtv platform, an online cinema platform similar to Netflix, which already has about 500,000 unique users per month.

The Internet has also helped the development of Nigerian agriculture. First, access to online data helps to overcome basic problems encountered by farmers by providing information on issues such as the choice of seeds, sowing time, and weather conditions. Second, access to the Internet has facilitated

trade by moving it into the virtual space. Third, the transfer of some state services online has helped to fight corruption. Minister of Agriculture Akinwumi Adesina, for example, introduced a system of electronic vouchers instead of the old schemes of public distribution of fertilizers and seeds—a move that cut off major corruption channels instantly.

For a long time, the contribution of the telecom sector was not taken into account by the state statistical bureau. Once the bureau began tracking this sector in 2014, it emerged that Nigeria had the largest economy in Africa, outpacing even South Africa.[17]

As of 2015, 58 percent of Nigeria's GDP came from the service sector, and another 20 percent from agriculture, making the oil and gas sector's contribution a relatively small 10 percent. For fifteen years, the economy grew by an average of 7 percent yearly. However, the country's resource-based past has left traces in the structure of the Nigerian economy.

Once a self-sufficient country, Nigeria began to experience problems with the production of mass consumption products. According to available data, food imports were five times higher than exports between 1990 and 2011. The average daily spending on food imports was $9.3 million.[18] According to recent data, in 2016 the country imported food products worth $3 billion to $5 billion. Of these, $1 billion was spent on the purchase of rice, and $400 million to $600 million was spent on fish products.

Domestic demand for a variety of crops and food products greatly exceeds domestic supply. Of the 6.3 million tons of rice, only 36 percent is supplied domestically; and Nigeria produces just 1.2 percent of the 4.7 million tons of wheat it consumes, 36 percent of 2.2 million tons of tomatoes, and 30 percent of 2.7 million tons of fish.[19] In 2015, food made up about 17 percent of total trade import, the same percentage as fuel.

During the 2000s, imports were financed by growing oil rents, the lion's share of which went to the state budget, according to World Bank data (see Appendix). The state increased spending in line with rising incomes. If the increase in the average government spending on consumption in the first half of the 2000s compared to the second half of the 1990s does not seem so great (from $3.8 billion to $4.9 billion, or 25 percent growth), in the second half of the 2000s, government spending jumped by 330 percent compared to the previous five-year period. This is a typical illustration of resource optimism: the belief that budget revenues will not decrease in the future. In turn, this leads to overconsumption.

Government spending continued to grow in the early 2010s, rising by 80 percent compared to the previous five-year period (or 670 percent compared to the first half of the 2000s). The current account balance also clearly demonstrates this, because while it remained positive in the 2000s and grew steadily along with oil rent, at the beginning of this decade it fell by 50 percent amid continued growth in government spending on consumption and oil rents.

To finance the budget deficit that arose during the period of low oil prices, external debt grew to the size of the GDP. In the mid-1990s it was almost 140 percent of GDP, but by 2004, with prices rising once again, virtually no debt remained.[20] It is worth noting that in the 2000s, the budget was always in deficit, but the deficit gradually fell from 2.2 percent to 0.2 percent between 2003 and 2008. After a drop in oil prices during the crisis, the cycle began again and the deficit rose to 3.2 percent, but began to decrease with the rise in prices.

The recent drop in oil prices forced the government to seek out new loans. Despite the fact that oil and gas accounts for about a tenth of GDP, oil revenues still make up 70 to 85 percent of budget revenues. As of June 2016, the public debt was $61.5 billion, of which only 13.8 percent was external debt. The federal government plans to raise a further $30 billion in the next three years (not counting probable loans of provinces that are already in debt) to overcome the looming recession: in 2015, economic growth dropped to 2 percent.[21] The ratio of external debt to GDP is extremely low (2.2 percent), so the government's chances of getting additional loans are high.

Another problem is the lack of basic infrastructure. In the office of the largest online supermarket Gloo.ng, the team of programmers works on the latest MacBook laptops—while sitting in close proximity to a gasoline generator.

The inefficiency of the electricity supply is magnified by the inefficient transportation of hydrocarbons, the country's main source of energy. Trains could partially solve this problem, but the existing railways would need to be updated. To fully meet the country's hydrocarbon needs, huge investments would be required in the construction of new roads. Nigeria's infrastructure is estimated by *The Economist* to require investments of $30 billion to $50 billion annually.[22] The country loses 3 percent of GDP each year due to problems in the energy sector.[23]

Growing rents, in turn, have facilitated the concealment and underestimation of the actual revenues of both the government and oil companies. The latter wanted to pay less in taxes, and the former feared conflicts over rent. Together, this has led to corruption reaching incredible dimensions.

Each successive federal government—from the military juntas of 1966–1976 and 1983–1998 to the civilian governments of 1960–1965, 1976–1983, and 1998 to the present—came to power on the back of anti-corruption rhetoric, but departed amid accusations of major embezzlement. In just one term under President Shehu Shagari (1979–1983), an estimated $16 billion in oil revenues was embezzled.[24]

President Muhammadu Buhari (a general who was the initiator of the military coup in 1983, and who later won an election) is famed for his ruthless attitude toward corruption. Upon coming to power in 2015, Buhari employed international auditing companies to examine the chronically opaque NNPC for the first time in Nigeria's history. As a result of the audit, it was uncovered that in 2014 alone, $19 billion was unaccounted for. According to some estimates, over the course of Nigeria's independent

history, the country has lost about $400 billion to corruption.[25] In the Transparency International ranking, Nigeria is ranked 136th, close to Tajikistan and the Comoros Islands.[26]

The fight against corruption in Nigeria, however, threatens to break the existing peace between political forces in the country. There is currently serious opposition inside the parliament to the president's resolute anti-corruption plan.[27] Despite the resistance, President Buhari and his government have already succeeded in recovering about $9 billion and punishing more than ten former officials.[28]

Residents of oil and gas regions are unhappy with their terrible living conditions, while the government and foreign companies earn hundreds of millions of dollars a week from the sale of oil. Their issues range from the lack of clean drinking water because of the pollution of the River Niger and the surrounding waters to the lack of schools and hospitals in many villages of the delta.

In early 2006, a group of armed men in speedboats attacked the oil rigs of the Italian company Agip, shot eight Nigerian workers, stole anything of value, and disappeared. In the same year, members of the Movement for the Emancipation of the Niger Delta attacked a Shell facility and took the staff hostage. There have also been attacks on oil platforms located on the continental shelf forty miles from shore.[29]

Nigeria is also continually plagued by ethnic and religious conflicts, even beyond the headline-grabbing atrocities of Boko Haram, a terrorist organization banned in Russia. In some provinces, particularly in an area known as the "middle belt" in the central part of the country that is home to more than 200 Muslim and Christian ethnic groups, about 1,400 people were killed in clashes in 2014. According to some estimates, the conflicts in these areas costs the country $13 billion in lost GDP.

The Nigerian experience shows how the discovery of resources and the subsequent struggle for their domination can polarize a fragmented society. The growth of oil dependence and the subsequent volatility of economic growth slowed down Nigeria's economic development until the beginning of the twenty-first century. Developments in the telecommunications and high-tech sectors helped the country to rid itself of its oil dependence, but Nigeria still suffers from the legacy of its resource-dependent past.

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Norway: History Repeating

ANDREY MOVCHAN

Norway, which covers an area of just 324 square kilometers on the northern coast of the Scandinavian Peninsula, has a population of 5.2 million people, and 94 to 97 percent of Norwegians are direct descendants of Vikings. The rest of the population are Sami, Swedes, Finns, Poles, and a tiny number of immigrants from other countries. Recently, however, Norway has begun annually receiving roughly 40,000 immigrants (0.75 percent of the population), including immigrants from Asia and Africa who account for about 40 percent of the new arrivals.

Only about 4 percent of Norway's territory is suitable for agriculture, so the country is forced to import 50 percent of its food. Nevertheless, in 2015 the country's GDP was $388 billion and Norway maintained its third-place ranking in the world in terms of GDP per capita, with $74,500 per person. In 2016, GDP was expected to decline to $375 billion, but Norway was expected to retain its GDP per capita ranking.

In 2013, Norway's GDP was over $500 billion. The country ranks 13th among the biggest oil producers in the world, pumping 1.77 million barrels per day, and supplies Europe with ever-increasing volumes of gas (more than 118 billion cubic meters in 2015), making it the second biggest hydrocarbon source for the European Union after Russia. Hydrocarbons accounted for 23 percent of the Norwegian GDP in 2015.

By the end of the nineteenth century, Norway was a peripheral country focused on the United Kingdom as a trading partner and specializing in the production and export of fish and maritime transport. At the beginning of the twentieth century, Norway had the third largest sea cargo fleet in the world. In parallel, the country developed internal industries ranging from shipbuilding to the production of woodworking machinery.

Norway was at that time a relatively poor country. The country's per capita GDP in the early twentieth century was a third less than the average for the countries of continental Europe. Like many European countries, Norway lost much of its population because of immigration to the United States, while the country's main businesses were gradually taken over by foreign companies, leading to growing unemployment.

The irreversible transformation of Norway into an impoverished province was halted by the development of electricity infrastructure and the subsequent boom in energy-intensive technologies. European companies built hydroelectric power stations on Norwegian waterfalls, setting up plants for the production of fertilizers, zinc, and aluminum near them.

By 1910 (five years after the completion of the process of gaining independence from Sweden), about 50 percent of Norwegian industry belonged to foreigners. It was at this time that a movement for the nationalization of industry began, with the Liberal Party at the helm. It received broad support from both nationalists and farmers, who saw industrialization as a threat, and therefore opposed foreign capitalists. New legislation established a framework for joint activities with foreign companies, essentially ensuring the development of engineering, manufacturing, and power generation industries in Norway.

Under its monarchy, Norway managed to ensure stable democratic governance and the early formation of a developed legal system. This was facilitated by the more or less equal distribution of land,[1] the traditionally important role of local councils, and the active mixing of the labor force: peasants participated in seasonal fishing, and coastal inhabitants helped with the harvest and logging.

The weakness of feudal power and the strength of independent groups and the peasantry were fundamental in Norway's early formation, establishing a form of social contract. Perhaps Norway's forced independence from Denmark in the late eighteenth century, when the Danish–British wars led to the blockade of the Straits, played a role. Norway lived quite independently for decades, without either a royal court or a national aristocracy, until it submitted to the authority of Sweden in 1814. This allowed the country to create a new social and political system for itself from scratch instead of building on Middle Age remnants, allowing the country to choose from the best models of governance of the time.

By the mid-nineteenth century, Norway had formed the primary basis of laws protecting labor and health care. By 1910, the country had compulsory medical insurance, and in 1919, Norway adopted the eight-hour working day. Emigration also played an important role in the smooth and peaceful reform process that made possible the aforementioned social contract. Almost a third of Norway's population, mainly its poorest segments, left the country in the late nineteenth to early twentieth century, removing many social tensions.

While Europe experienced a nationalist crisis in the 1910s to 1930s, which resulted in communist, national socialist, or fascist movements coming to power in over half of Europe, for Norway this was a period of relative peace. This made it possible to develop the country's social pact further. Norway introduced pensions in 1936 and unemployment insurance in 1938. After the German occupation of

1940–1945, Norway's three leading parties jointly supported the speedy development of the welfare state, and from 1946 to 1964 the country introduced universal health insurance and set up a system of credit and financing for the purchase of housing, a child care system, and much more.

By 1970, Norway could be considered a socialist state, but the real income of households in Norway was 30 to 40 percent of the level in Sweden and Denmark.

The first oil was found on the Norwegian shelf in 1969, and production began in 1971. Initially, there was 50 percent state participation in all projects, with oil production enshrined into law, allowing for foreign companies to bring the necessary technology to Norway and provide logistical support. Then it was decided that parliament should be able to increase or decrease the country's stake, depending on the circumstances. The state oil company Statoil was established in 1972. From 1985, state participation was divided into two parts: uncompensated equity participation and the State's Direct Financial Interest (SDFI), through which the state participates in projects and receives proportional revenue. In 2001, Statoil bought part of the SDFI, was listed on the stock exchange, and the new company Petoro was created to manage the SDFI.

When the oil boom dramatically increased revenues in hydrocarbon-rich countries for the first time in the mid-1970s, Norway was not in the process of formulating its economic policy, as it was already fully formed. Unlike the economic doctrine of the United Arab Emirates, however, the focus of Norwegian policy was not answering the question of how to create added value, but on cementing the principles of distribution. This focus (not to mention the heritage of having built a welfare state over the previous 150 years), reflects the significant differences between the situation in Norway and the UAE, which can be summed up as follows:

—Hydrocarbon production in Norway was only comparable with the level of production in the UAE at Norway's peak of 2003–2004. On average, Norway produced 40 to 50 percent less oil per year. The cost of oil production in the UAE is four times lower than the cost of oil production in Norway.

—The native population of Norway in 1970 was five times larger than in the Emirates, and is still three and a half times bigger.

—The United Arab Emirates enjoys relative independence from its neighbors, allowing it to bring in a large volume of cheap foreign labor. Norway, which has virtually no boundaries with the Nordic Union and is a member of the Schengen Agreement and the European Free Trade Area, cannot afford this kind of liberal migration policy because of its neighbors' fears that labor migrants would rush across the Norwegian border.

—Significant differences in the traditions and way of life of the native population of the UAE made it possible to create conditions for its successful segregation from foreign immigrants and temporary

workers. Norway, which has a culture, language, and traditions that are close to other European countries, could not be protected as easily from assimilation in the event of a mass influx of highly paid experts from Western Europe and cheap labor from Eastern Europe, for which the economic preconditions existed. This is partly why Norway did not join the European Union.

Since the 1980s, the country's economic policy has followed the principles of the Oslo School, which focus on financial regulation measures, accumulating reserves, and state domination. The main tenets of Norway's economic policy are:

1. The concentration of assets in state ownership

All natural resources in Norway are owned by the state, which only provides temporary licenses for the extraction of natural resources. The state also owns major stakes in key sectors: in the oil and gas production sector through Statoil, in hydroelectric power through Norsk Hydro, in the banking sector through DNB, and in telecommunications via Telenor. A total of 31.6 percent of the publicly traded market is state-owned, and if non-listed companies are included, according to some data, the proportion of GDP owned by the state is more than 50 percent.

Although Norway is considered to be a free market economy, the dominance of the state cannot help but influence the economy. With an Economic Freedom Index score of 70.8 in 2015, Norway is two points behind the United Arab Emirates and Sweden, and six points behind the United Kingdom, Norway's main trading partner.

2. Creating and maintaining maximally free markets, minimizing barriers across all sectors, except for agriculture

Immediately after World War II, Norway could at best be called a semi-industrialized country, specializing in fisheries, timber production, and hydroelectricity. All three specializations had obvious natural limitations of scale, and therefore economic growth could only be achieved by actively diversifying the economy. During this period, the country saw a lively discussion between supporters of import substitution and their opponents who favored export diversification.

Ultimately, the decision was made in favor of export diversification, combined with a maximum opening of the market to foreign companies and the creation of conditions for intense competition on the domestic market.

As a result, Norway set import and export duties at levels much lower not only than those of countries in Central and South America, which actively defend their markets through 100 to 200 percent duties, but also when compared with developed countries in Europe. Average import

rates in Norway shortly before the development of active oil production were at 11.7 percent, while they were above 16 percent in the United Kingdom, above 17 percent in the United States, and on average 14 percent in Europe.

On the other hand, openness came gradually. In the early 1950s, Norway refused to join the Northern Alliance with Denmark and Sweden because of fears that its growing industry would not be able to compete in a single customs union: duties in Norway were slightly higher than in the other Nordic countries. But by 1958, Norway supported the creation of a Europe-wide free trade area, and the Norwegian Federation of Industries *joins* the federations of other Scandinavian countries. In 1959, Norway became a founding member of the European Free Trade Area (EFTA), through which all tariffs on non-agricultural products were essentially eliminated.

As a result, by 1966, the proportion of industrial goods in Norway's exports had increased to 31 percent, and the export volume of industrial goods was 12 times higher than in 1949, when Norway had been supplying a devastated postwar Europe with everything it could, at full production capacity. By 1970, 16 percent of industrial goods was being exported. Industrial production grew at a rate of almost 6 percent per year.

Before the oil era in Norway there were no moves toward import substitution. The proportion of imports in Norway's use of industrial goods increased from 29 percent in 1958 to 39 percent by 1966.

3. Progressive taxation and higher corporate taxes as a mechanism to redistribute income, reduce inequality, and build a socialist state

Private income is taxed in Norway through several taxes (e.g., direct income tax, additional income tax, and social charges to the employer and the employee), making the tax rate 54 percent.

Corporate income is taxed at a rate of 27 percent, but companies working in the oil and gas industry are subject to additional income taxes, increasing the overall rate to 78 percent. The revenues of companies working in power generation are taxed at a combined rate of 58 percent.

Property is taxed at a rate of 1.1 percent per year. About two-thirds of Norway's municipalities also levy a real estate tax of up to 0.7 percent.

One of the main sources of income to the budget is value added tax, which for main product groups is 25 percent, while the lower limit is 8 percent. Only public services (financial, medical, educational) and publishing houses are exempt from taxes or have a zero tax rate.

In total, tax revenues to Norway's budget exceed 41 percent of GDP, a figure that is close to the maximum level seen across the world, even for EU countries.

4. The establishment of a state reserve fund, set up using extra income from the export of resources, to support the state's social functions

The State Global Pension Fund was established in 1990 and received its first payments in 1996. The fund operates on the basis of a very simple rule. It receives all state revenues from the production, processing, and marketing of hydrocarbons, minus the current (non-oil) national budget deficit. The fund invests in a wide range of securities outside Norway, mainly in shares. As of mid-2016, the fund managed more than $875 billion, essentially owning one percent of the global stock market.

Since 2004, the fund's management has been supervised by the board of trustees, which deals with issues including investment ethics. With nearly $1 trillion at its disposal, the fund not only refrains from investing in shares and debts of companies that directly or indirectly facilitate killings, torture, restrictions of liberty, or other human rights violations, but also has an active influence on the value of such companies through its sheer size. At the same time, paradoxical though it may seem, the fund has the right to invest in stocks of weapons manufacturers, with the exception of nuclear arms.

Excluding management costs, the fund has shown 3.8 percent annual growth since 1999. In recent years, the fund has come under increasing criticism for showing a net result lower than global equity indices. On the other hand, the fund's volatility is lower than that of other indices.

5. Preservation and development of transparent public institutions, high levels of public sector control

In terms of transparency and institution monitoring, Norway is not very different from the other Nordic countries. In 2014, it was ranked fifth in the world in the Transparency International anti-corruption ranking of 175 countries.

A RELATIVE SUCCESS

The overall results of Norway's policies are ambiguous. On one hand, Norway is considerably less dependent on the hydrocarbon market than many other oil-producing countries. Even in 2016, its GDP per capita exceeded $60,000 per person, of which no more than $20,000 can be attributed directly to the hydrocarbon market (no more than $40,000, if indirect revenue from the oil and gas sector and related services is taken into account). Without oil, Norway's GDP per capita would be slightly more than that of Poland, but far less than its neighboring countries and the countries of Central Europe.

Norway's purchasing power parity is very high, and the low cost of domestic transactions cannot explain the low GDP. Norway fell in the global index of economic complexity from 10th place in

1964 to 25th in 1995 and 45th by 2012. In 2014, it rose to 33rd place, but that was still low for a period of high oil prices. For comparison, China ranked 19th and the United Kingdom ranked 10th.

Welfare state policy combined with the liberalization of price controls and open markets led to the hypertrophy of costs. Norway's real cost of labor index rose from 53 in 1996 to 123 in 2016, and it continues to grow. Official sources say that consumer prices in Norway are about 30 percent higher than in the United States, but many Norwegians and tourists argue that the difference is actually much greater.

Confidence in the future in conjunction with long-term subsidized interest rates[2] led to a dangerous situation on the real estate market: prices increased 2.2 times in 2008, and the total debt of households exceeded 215 percent of their annual income. The gradual increase in the proportion of resource-based businesses and businesses with low added value in the GDP was a natural reaction to this situation.

This is most clearly reflected in the low level of foreign direct investment (FDI) in Norway (while state investment in business is focused mainly outside the country). While in EU15 countries, FDI has not been below 2 percent of GDP since 2008, and has on average been higher than 3 percent, in Norway, FDI grew slowly from 0.3 percent to 0.8 percent of GDP. Another indirect sign of de-industrialization is the proportion of spending on R&D: in Norway, it averages 1.4 percent of GDP, while the average for countries in the Organization for Economic Cooperation and Development (OECD) exceeds 2.2 percent.

The government has consistently sought to stimulate increased foreign investment and industrialization. Until the 1970s, its main aim was the creation of large companies, which it was believed would close the gap in manufacturing productivity. The main tool was public investment, and Norway's main competitive advantage was (supposedly) access to cheap hydropower and other resources. In most cases, the state itself became the owner of these manufacturing plants. As a result, monotowns—towns built around the activities of one industrial facility—appeared, which tended to be poorly integrated into the national supply chain (especially when the owner was a multinational company) and isolated from the industrial clusters.

The Ministry of Industry then encouraged large-scale capital investments. Capital investments and the scale of production were identified as the main factors for development, rather than research or technology. In 1965, the Development Fund was established with a declared goal of creating a rational structure in each industry and supporting "national champions" such as Aker.

From the 1960s, a growing proportion of the financing for production and research went to the national champions, including companies in the defense sector, from the Norwegian Defense Research Establishment (FFI) to the state-owned Kongsberg. The policy of mostly supporting the largest companies ended in the late 1980s, when several supposedly leading companies[3] went

bankrupt or severely reduced the scale of their operations under pressure from international competition. Major industrial companies, primarily Norsk Hydro, were forced to drastically reduce investment, especially in knowledge-intensive technology.

The government's response was to change its strategy from industrialization from above to a so-called user-based industrialization strategy, in which investment and benefits are issued in response to industry demands and not in accordance with a theoretical plan. Core financing of applied industrial research institutes was cut. These changes coincided with the beginning of the dominance of the oil and gas sector, as other sectors of the economy were pushed out from investment and R&D, since demand from the oil and gas sector was much better paid by the companies themselves.

In 2003, the government adopted a new program of innovation. A unit for large programs was created, along with the Research Council of Norway, Centers of Academic Excellence (SFF), and Centers for Research-based Innovation (SFI). To date, however, their results have been very modest.

In the last decade, the country's leadership has shown an increased interest in the creation of clusters,[4] but this shift is more of a nod to global trends than an opportunity to fundamentally change the structure of the economy. At the same time, many new measures—such as the recent decision to partly regionalize research funding—have raised serious doubt over the rationality of the Norwegian approach to the development of the "new economy."

As in other resource-dependent countries, Norway's non-oil GDP (known as mainland GDP, as opposed to shelf GDP, as hydrocarbon production takes place at the Norwegian shelf) has a strong correlation to shelf GDP. The most recent mainland GDP growth peak (of 4 percent) occurred in 2012. In 2016, mainland GDP grew by just 0.1 percent, as shelf GDP fell. According to Harvard University, Norway's GDP will grow at an average rate of 1.73 percent over the next ten years, putting it in 110th place in a study of 121 countries, at the same level as Algeria and Georgia. But even this estimate may be optimistic: investment fell by 4 percent in 2015, following the stagnation of 2014, and continued to decline in 2016.

According to public data, Norway extracted nearly half of its hydrocarbon reserves in forty years. Production of hydrocarbons in the country has declined from its peak (2003–2004) by 15 percent, and supplies of Norwegian gas will have decreased by 40 percent by 2025. Norway needs to prepare for the period when it not only ceases to suffer from the resource curse, but when it becomes an importer of hydrocarbons. *Statistics Norway* estimated the country's income deficit in 2030, under the current structure of the economy, at $40 billion a year—more than 10 percent of the current GDP.

And yet, despite this alarming prognosis, the main debate in the country is not on how to motivate the diversification of the economy and reduce the burden on business, but on the dangers of immigration and expansion of social assistance.

While Norway has announced steps to reduce taxes, there are simultaneous discussions on increasing budget spending to support economic growth, which in the third quarter of 2016 decreased by 0.8 percent in annual terms. The combination of these two measures is contradictory, so Norway will likely need to reassess the principles of use of the pension fund. Recently, for the first time, the government has taken from the fund more than it made.

Of course, with the pension fund currently standing at 2.5 percent of annual GDP, the country has at least another two or three decades of guaranteed prosperity, even if the trends of deindustrialization and simplification continue.[5] But later, if the country does not reconsider its approach to stimulating the economy, there is a strong chance that Norway will return to the state it was in until 1969, and will once again become a poor northern country whose main exports are dried cod and knitted sweaters.

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NOTES

1. Norway did not historically have major feudal lords, and by the nineteenth century, the majority of the population owned small land plots.

2. The real rate of refinancing in Norway has been negative for five years. In 2016, the real rate was minus 3 percent.
3. These companies were primarily in the field of new information technologies and electronics, including Norsk Data and Tandberg.
4. The oncological cluster in Oslo is an example.
5. This is very likely if the fund is used actively.

A Comparative Analysis of Country Case Studies

The countries presented in this report can be divided into four groups based on a combination of two factors: the volume of resources available (a mathematical per capita measurement of oil production) and the effectiveness of the economic use of resources (the ratio of oil production to the country's total gross domestic product). In terms of units, it is convenient to use barrels per person per year for the first parameter, and barrels to GDP, where GDP is expressed in millions of dollars, for the second.

The second metric, that of efficient use, is of course conditional, as it not only includes the result of the use of hydrocarbon revenues in economic development, but also the impact of other factors on GDP. This figure is important, however, since the ultimate goal of economic policies is to maximize the rate of overall economic development. High values for this parameter reveal, among other things, the greater ability of a country to diversify, which is the main task faced by countries seeking to break free of the resource curse.

The results of this grouping are shown in the Appendix (see the two figures on oil dependence).

As these figures show, Norway, the United Arab Emirates, and Saudi Arabia form a group of countries with very high resource security (Group 1). Their efficiency of use varies, however: it is relatively high in Norway, average in the UAE, and low in Saudi Arabia.

Angola and Azerbaijan form a pair of countries with medium resource security and a very low efficiency of use (Group 2).

Venezuela, Iran, and Russia, which was not included in this report, make up a group of countries with medium resource security and average efficiency of use (Group 3).

Finally, Mexico, Indonesia, and—strange as it may seem—Nigeria comprise a group of countries with low resource security but high efficiency of use (Group 4).

GROUP 1

The countries with high resource security would seem to differ according to every possible parameter, starting with the political system. Norway is a democracy, while the UAE and Saudi Arabia are governed by authoritarian regimes. Two of the three countries—Norway and the UAE—have comparable levels of efficiency of use and similar per capita GDP, median household income, GDP growth, and other economic indicators. By some parameters, the liberal, democratic Norway falls short of the authoritarian UAE. This observation represents a rough but useful analysis tool that allows us to consider all the differences between the UAE and Norway as insignificant to their economic development, whereas any differences between Norway and the UAE, on the one hand, and Saudi Arabia, on the other, can be considered significant.

Country	**Norway**	**UAE**	**Saudi Arabia**
Political Regime	Democratic	Authoritarian	Authoritarian
Turnover of Power	Yes	No	No
Personal Freedom	High	High	Extremely Low
Religious Restrictions	None	Limited	Totalitarian
Structure of the Economy	Liberal market	Liberal market with a number of restrictions	Centrally managed with a number of exceptions
Mechanisms of Resource Revenue Distribution	Welfare state with high taxes	Subsidies and low taxes	Subsidies
Excess Income Allocation System	Sovereign wealth fund	Sovereign wealth fund	Sovereign wealth fund
Surplus Asset Management	On foreign markets with elements of investment in the domestic market	On foreign markets with elements of investment in the domestic market	On foreign markets with elements of investment in the domestic market
Level of Infrastructure Development	High	High	Above average
Level of Public Investment	Significant	Significant	Significant

Country	Norway	UAE	Saudi Arabia
Openness	High	High	Low
Foreign Investment	Significant	Significant	Low
Proliferation of Foreign Businesses and Professionals	High	High	Low

As this rough comparison shows, there is a significant difference between Norway and the UAE on the one hand and Saudi Arabia on the other, visible primarily in two factors: the level of personal freedom and openness of the economy. Norway and the United Arab Emirates are, however, fundamentally different according to two metrics: the type of government (democracy vs. authoritarianism) and the system of wealth distribution (welfare state and high taxes vs. a virtually tax-free state with a high level of subsidies).

There is reason to believe that the type of government and the turnover of power, as well as the means of redistributing revenues from resource rents, only have an indirect influence on the success of resource-dependent economies. At the same time, the openness of the economy, the level of foreign influence, and the extent of personal freedoms are of crucial significance to the development of a country's economy.

GROUP 2

The second group consists of two countries in which the effect of the resource curse is especially visible. While some of Angola's problems can be attributed to its colonial history, underdeveloped infrastructure, and most important, the civil war, Azerbaijan cannot blame its challenges on a difficult past. As part of the Soviet Union, by 1991 Azerbaijan had the same starting conditions as, for example, Kazakhstan or Georgia, except with significant hydrocarbon reserves. Analysis requires the identification of the common properties of these two countries—more precisely, those that set them apart from countries with a more successful history of natural resources use.

Country	Azerbaijan	Angola
Political Regime	Authoritarian	Democratic with elements of authoritarianism
Turnover of Power	No	In practice, no
Personal Freedom	Low	Medium

Country	Azerbaijan	Angola
Religious Restrictions	Limited	Limited
Structure of the Economy	Centrally controlled	Market liberalism with a number of restrictions
Mechanisms of Resource Revenue Distribution	Subsidies	Undeveloped
Excess Income Allocation System	Sovereign wealth fund	Sovereign wealth fund with global investments
Surplus Asset Management	Reinvesting in the domestic market, attempts at investing in the global market	On foreign markets, with small investments in domestic markets
Level of Infrastructure Development	Low	Low
Level of Public Investment	Significant	Significant
Openness	Low	Low
Foreign Investment	Insignificant	Significant
Proliferation of Foreign Businesses and Professionals	Low	Medium

Both Azerbaijan and Angola have underdeveloped infrastructure, relatively closed economies, restrictions on rights and freedoms, and authoritarian rule. Angola, which is less authoritarian and has more economic freedom, is much more efficient than Azerbaijan at creating a non-oil GDP.

In addition to the aforementioned problems, Angola and Azerbaijan are characterized by:

—the inability to save surplus oil revenues, and the spending of a large part of the collected rents on budget expenditures

—increased militarization: the two countries are in a state of military conflict, have disputed territories, and allocate substantial resources to the military

—high levels of corruption

However, these symptoms also occur in more efficient countries with a higher average production of hydrocarbons per capita, such as Iran, Venezuela, Nigeria, and Russia. But only in Angola and Azerbaijan are they so clearly defined.

GROUP 3

Venezuela and Iran make up the third group of countries, with an average level of efficiency and average production levels. It should be noted that "average efficiency" means the level of the United Arab Emirates, whose only significant difference from the Group 3 countries is its volumes of oil and gas per capita. But the standard of living differs greatly between Groups 1 and 3. Iran and Venezuela are the poorest countries on this list. While the Iranian regime rests quite firmly on its authoritarianism, with rigid religious controls and archaic traditions of social structure and production, significant changes are brewing in Venezuela.

Country	**Venezuela**	**Iran**	**Russia (for comparison)**
Political Regime	Democratic with elements of authoritarianism	Authoritarianism	Democratic with elements of authoritarianism
Turnover of Power	No	No	No
Personal Freedom	Medium	Low	High
Religious Restrictions	None	Totalitarian	None
Structure of the Economy	Fully regulated and centralized	Regulated and centralized	Market liberalism
Mechanisms of Resource Revenue Distribution	Subsidies	Almost lacking	Subsidies
Excess Income Allocation System	None	Sovereign wealth fund	Sovereign wealth fund
Surplus Asset Management	None	In foreign markets with investment in the domestic market	In foreign markets with investment in the domestic market
Level of Infrastructure Development	Low	Low	Medium
Level of Public Investment	Significant	Significant	Significant

Country	Venezuela	Iran	Russia (for comparison)
Openness	Low	Low	Medium
Foreign Investment	Insignificant	Insignificant	Insignificant
Proliferation of Foreign Businesses and Professionals	Low	Low	Low

The only factors uniting the countries of the third group are the use of subsidies as a form of excess revenue distribution and the closed nature of the economies, which is characteristic of all the countries studied that reveal a low efficiency of use.[1]

A preliminary conclusion can be drawn that it is the openness or closed nature of a country to foreign investment, specialists, and technology that is a key factor in the successfully diversifying the economy and freeing it from resource-dependency.

GROUP 4

The fourth group comprises Mexico, Indonesia, and Nigeria. This group is not only united by the high diversification of their economies, but also by the relatively low level of per capita production of hydrocarbons. It cannot be said with any certainty, therefore, which is the main reason for successful diversification: effective economic policy or simply not being "cursed" with too many resources.

Country	Mexico	Indonesia	Nigeria
Political Regime	Democratic	Democratic with elements of authoritarianism	Democratic with elements of authoritarianism
Turnover of Power	Yes	Yes	Yes
Personal Freedom	High	High	High
Religious Restrictions	None	None	None
Structure of the Economy	Market liberalism	Market liberalism	Market liberalism
Mechanisms of Resource Revenue Distribution	Subsidies, low taxes	Subsidies	Subsidies
Excess Income Allocation System	None	Weak	None

Country	Mexico	Indonesia	Nigeria
Surplus Asset Management	None	None	None
Level of Infrastructure Development	Medium	Medium	Low
Level of Public Investment	Low	Medium	Low
Openness	High	High	High
Foreign Investment	Significant	Significant	Average
Proliferation of Foreign Businesses and Professionals	High	High	Average

All of these countries have reasonably open economies and a liberal market structure. It is, perhaps, the combination of these two factors that enables them to successfully diversify.

In conclusion, it is important to remember that diversification from the natural resource sector is relative, and that countries with low per capita resource extraction can give a false sense of economic success. One example is Nigeria, where per capita GDP is just under $3,000 (a little less than Angola). Yet in our analysis, Nigeria falls into the category of successful countries. For a country with a low volume of resources per capita to prosper, successful diversification is not enough. High rates of growth in the non-resources sector of the economy are also essential.

NOTES

1. The exception is the UAE, if Angola's openness to Chinese corporations is not taken into account. The UAE's comparative inefficiency can be explained by its abundance of oil.

Appendix

Figure 1: **Oil Dependence, Part 1**

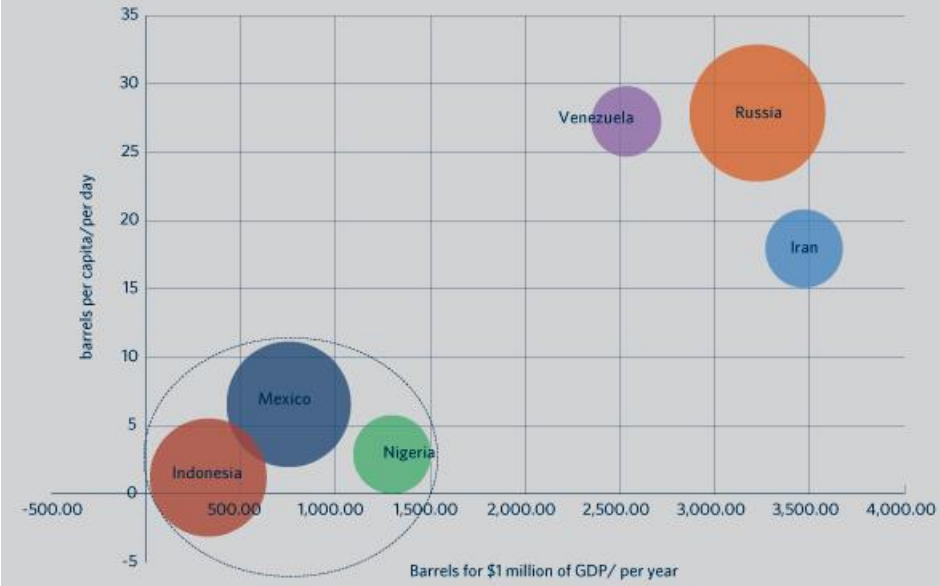


Figure 2: **Oil Dependence, Part 2**

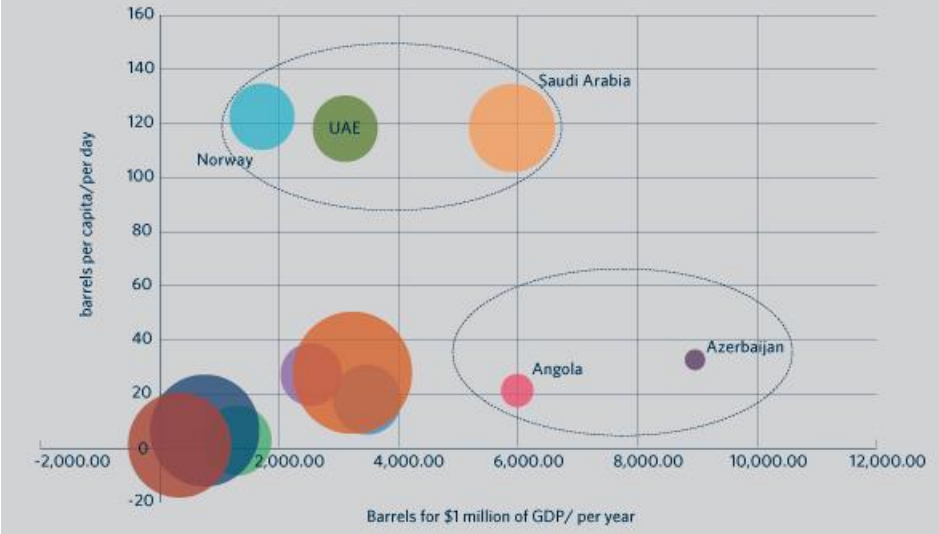
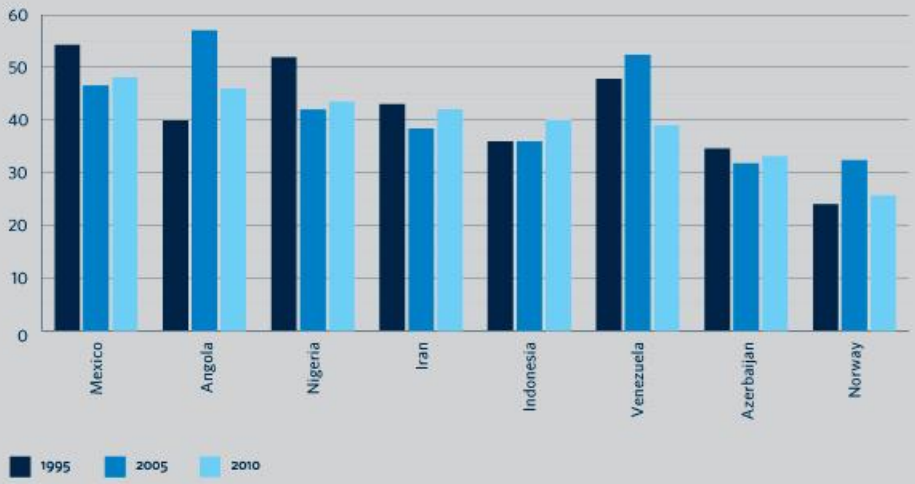
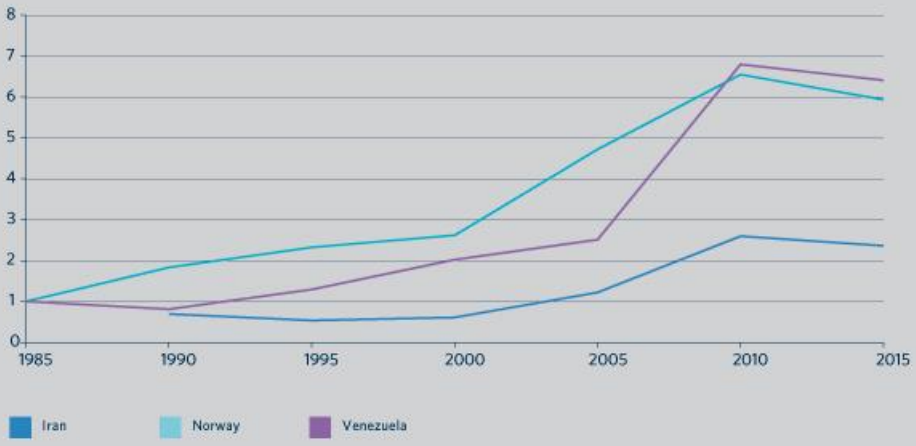


Figure 3: **GINI Index**



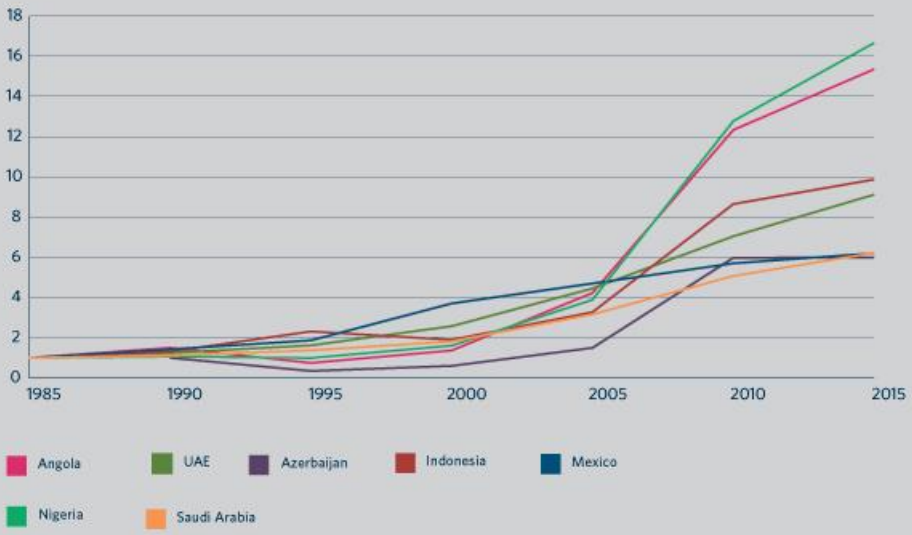
Sourses. World Bank, photius.com(CIA World Factbook 2014), http://fsolt.org/swiid/

Figure 4: **GDP Growth in Various Countries Since 1985, Part 1**



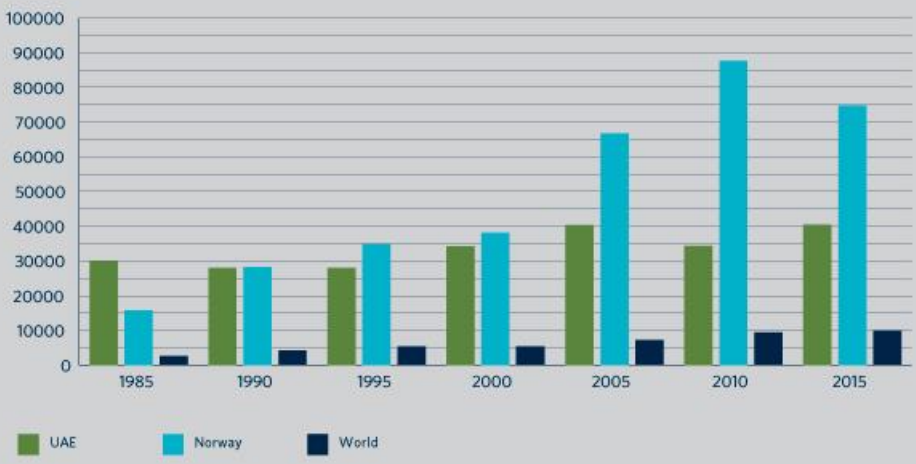
Sourse. World Bank
Note. The value of 1 was assigned to 1985 data, when Angola's GDP was $6.68 billion, the UAE's GDP was $40.6 billion, Inndonesia's GDP was $87.34 billion, Mexico's GDP was $184.47 billion, Nigeria's GDP was $28.87 billion, and Saudi Arabia's GDP was $103.9 billion; Azerbaijan's GDP as of 1990 was $8.86 billion.

Figure 5: **GDP Growth in Various Countries Since 1985, Part 2**



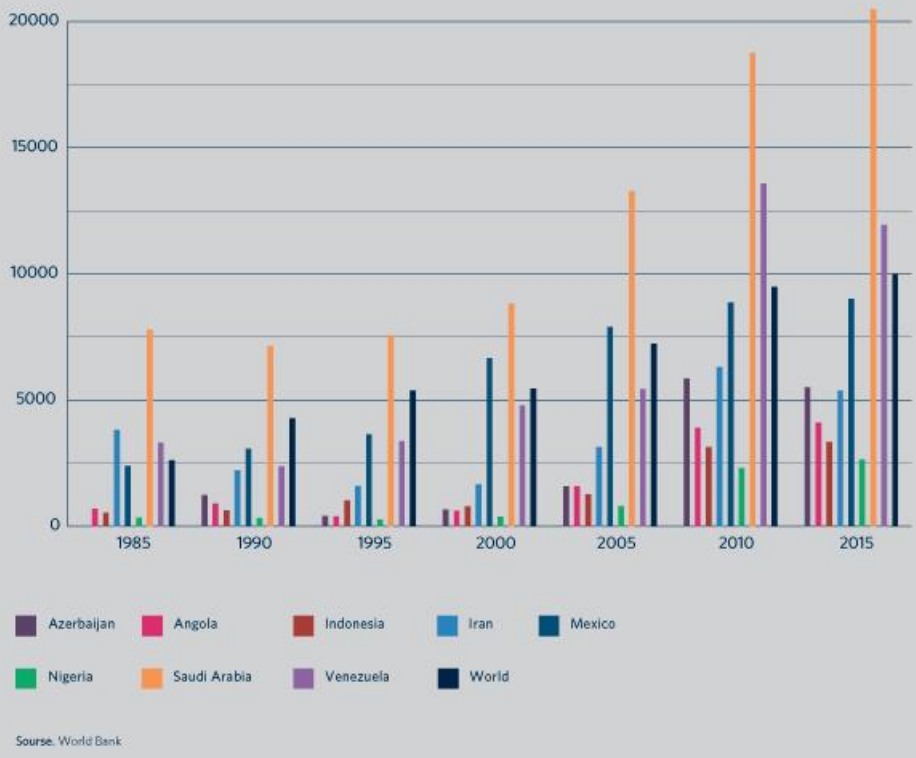
Sourse. World Bank
Note. The value of 1 was assigned to 1985 data, when Angola's GDP was $6.68 billion, the UAE's GDP was $40.6 billion, Inndonesia's GDP was $87.34 billion, Mexico's GDP was $184.47 billion, Nigeria's GDP was $28.87 billion, and Saudi Arabia's GDP was $103.9 billion; Azerbaijan's GDP as of 1990 was $8.86 billion.

Figure 6: **GDP Per Capita, in U.S. Dollars, Part 1**



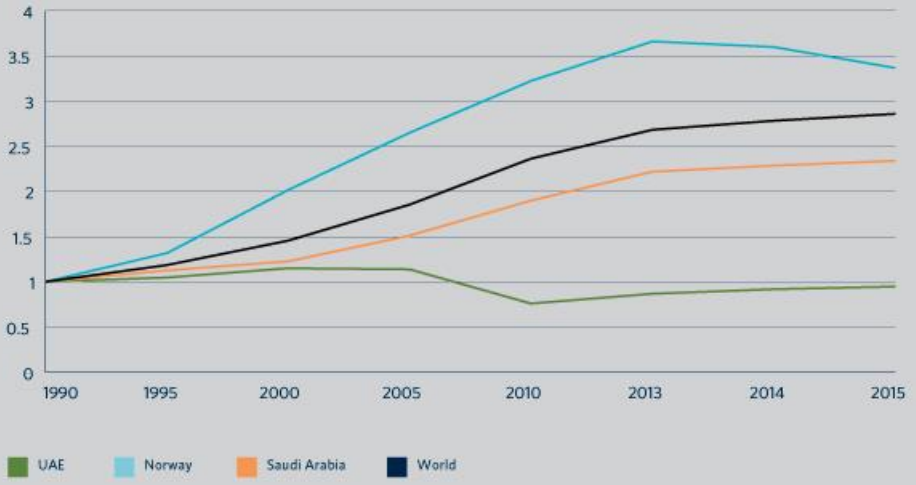
Sourse. World Bank

Figure 7: **GDP Per Capita, in U.S. Dollars, Part 2**



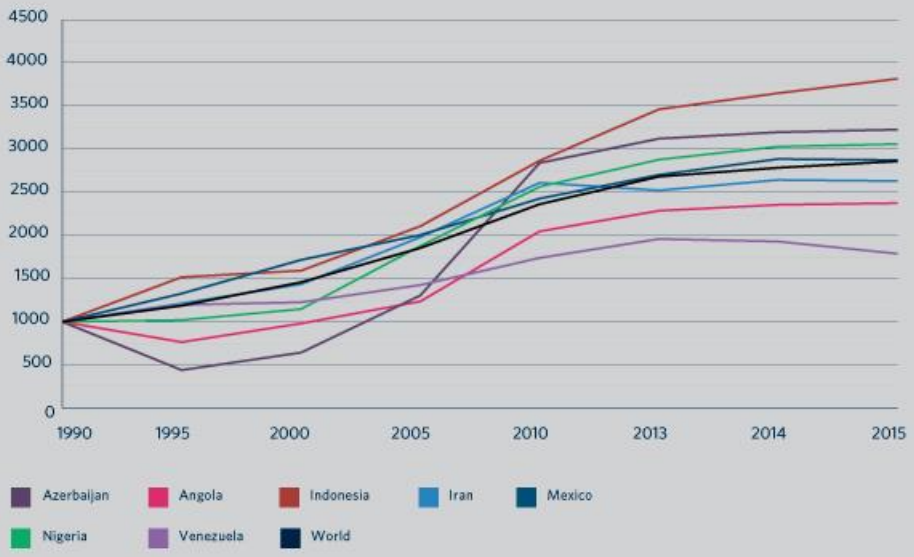
Sourse. World Bank

Figure 8: **GDP Per Capita, in Purchasing Power Parity, From 1990 to 2015, Part 1**



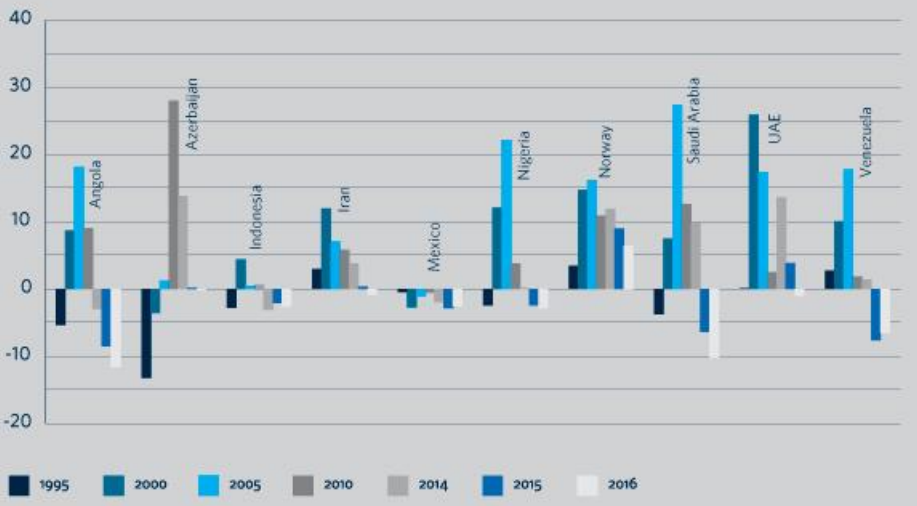
Sourse. World Bank
Note. The value of 1 was assigned to 1990 data, when GDP per capita PPP was: int'l $4017.3 in UAE, $18255.4 in Norway, $22843.1 in Saudi Arabia, $5413 on average in the world.

Figure 9: **GDP Per Capita, in Purchasing Power Parity, From 1990 to 2015, Part 2**



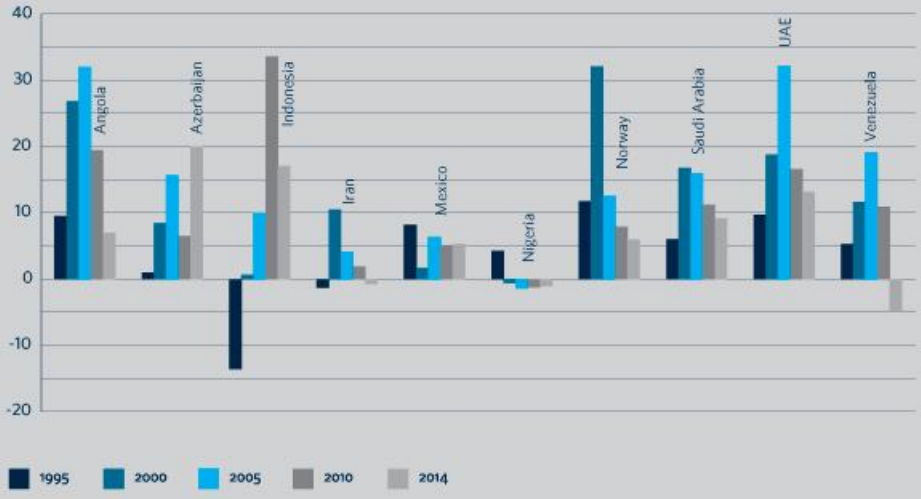
Sourse. World Bank
Note. The value of 1 was assigned to 1990 data, when GDP per capita PPP was: int'l $3107 in Angola, $5502 in Azerbaijan, $2894 in Indonesia $6576 in Iran, $6,019 in Mexico, $1959 in Nigeria, $9340 in Venezuel, 5413 on average in the world.

Figure 10: **Current Account Balance, as a Percent of GDP**



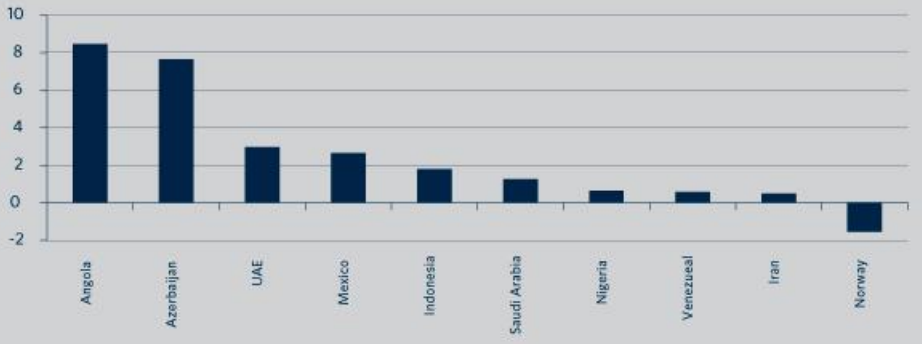
Sourses. World Bank, IMF.

Figure 11: **External Balance on Goods and Services, as a Percent of GDP**



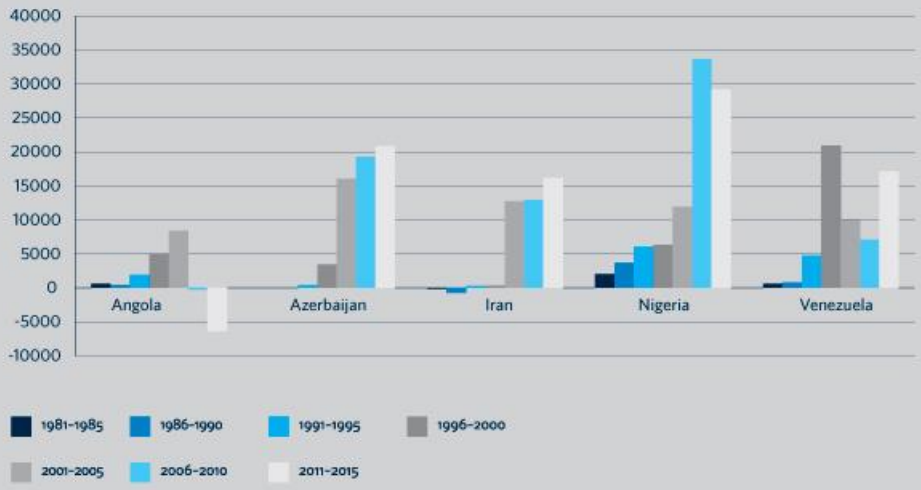
Sourse. World Bank.

Figure 12: **Foreign Direct Investment, as a Percent of GDP, 2015**



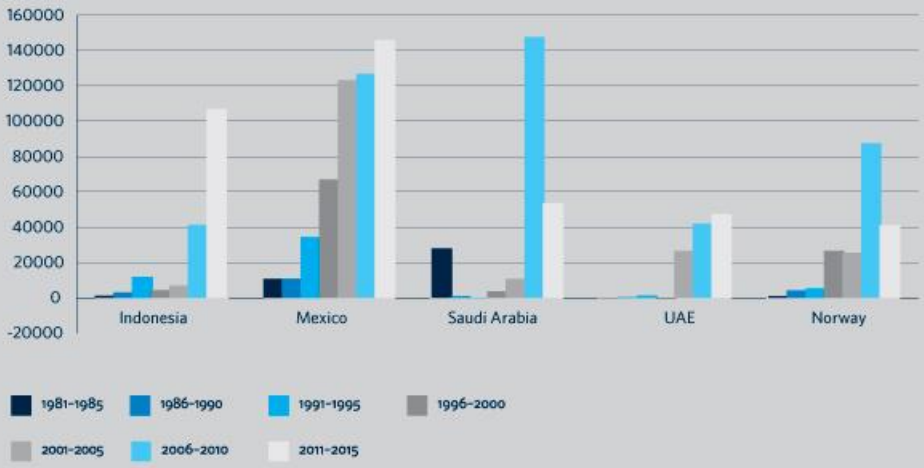
Sourse. World Bank.

Figure 13: **Foreign Direct Investment, in Millions of U.S. Dollars, 5-Year Total, Part 1**



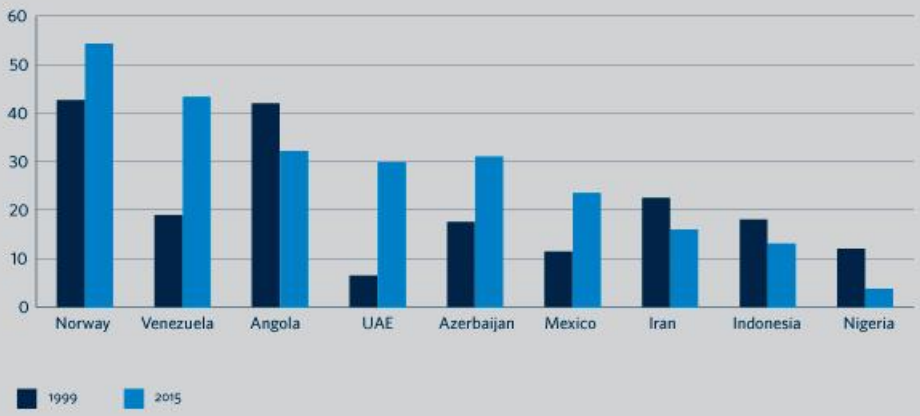
Sourse. World Bank.

Figure 14: **Foreign Direct Investment, in Millions of U.S. Dollars, 5-Year Total, Part 2**



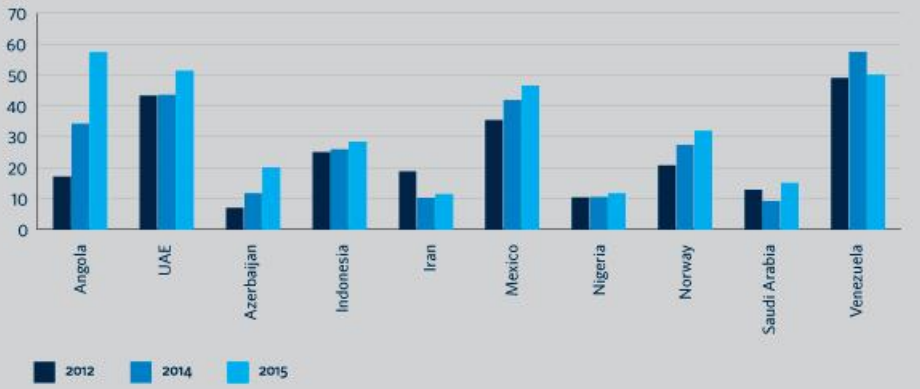
Sourse. World Bank.

Figure 15: **Budget Revenue, as a Percent of GDP**



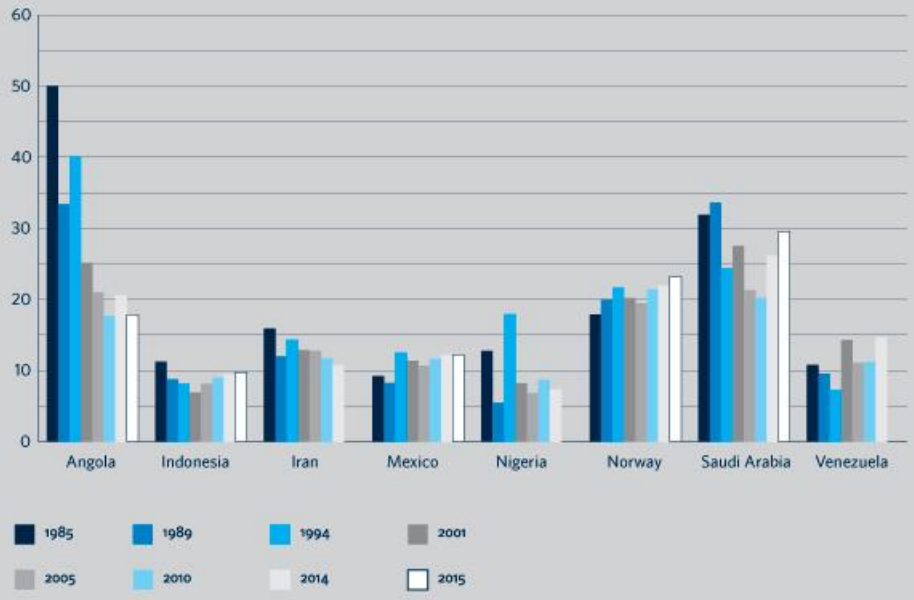
Sources. World Development Indicators: https://www.cia.gov/library/Publications/the-world-factbook/rankorder/2221rank.html#ir

Figure 16: **Central Government Debt, as a Percent of GDP**



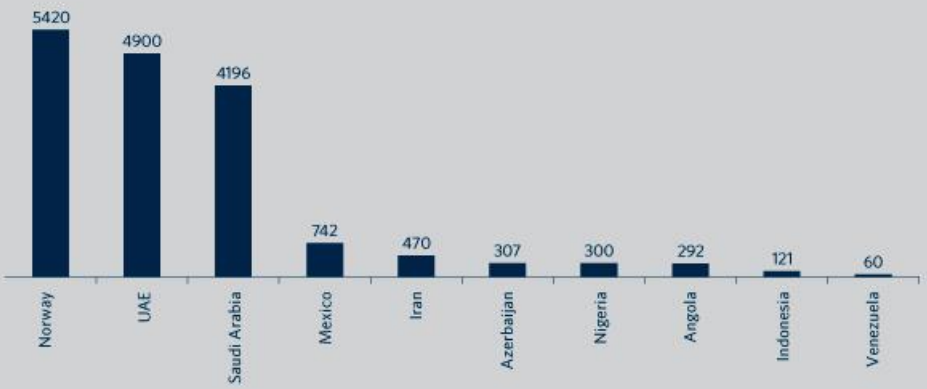
Sources. https://www.cia.gov/library/; World Bank.

Figure 17: **General Government Final Consumption Expenditure, as a Percent of GDP**



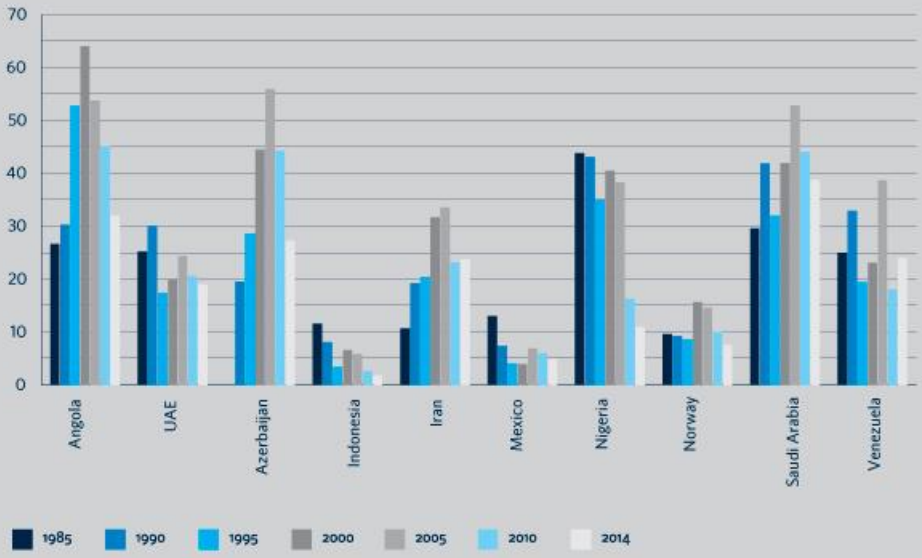
Sourses. World Bank; CIA world factbook.

Figure 18: **Average Monthly Salary in U.S. Dollars, 2015**



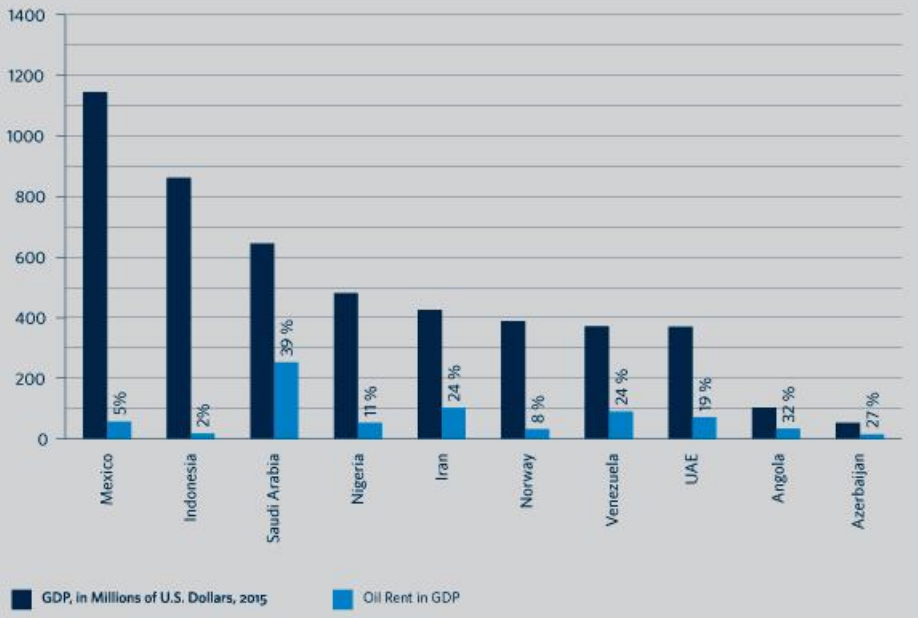
Sourse. World Bank.

Figure 19.1: **Oil Rent as a Percent of GDP**



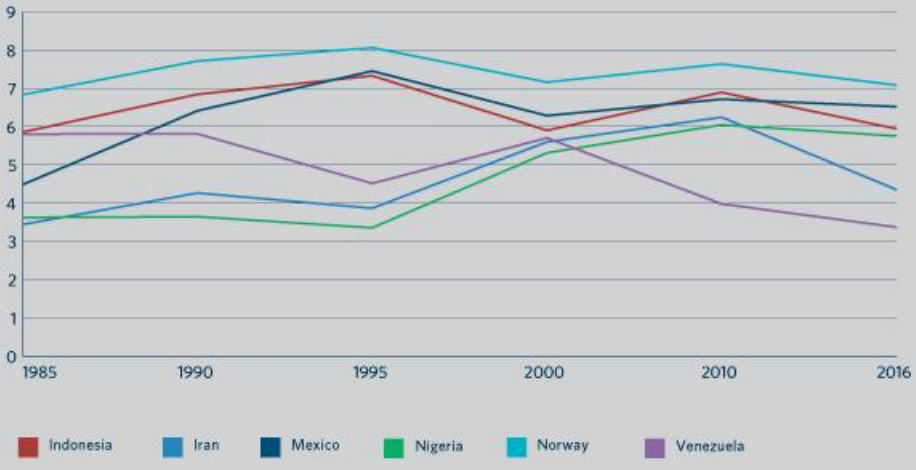
Source. World Bank.

Figure 19.2: **Oil Rent to GDP Ratio, 2015**



Source. http://www.indexmundi.com/facts/indicators

Figure 20: **Index of Economic Freedom**

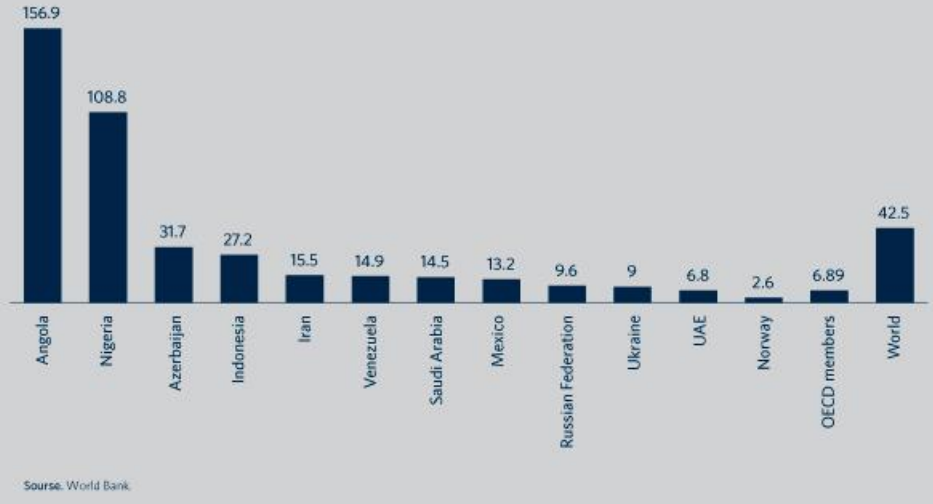


Sourse. The Heritage Foundation: The Index of Economic Freedom 2016.

Figure 21: **Index of Economic Freedom, World Rankings, 2016**

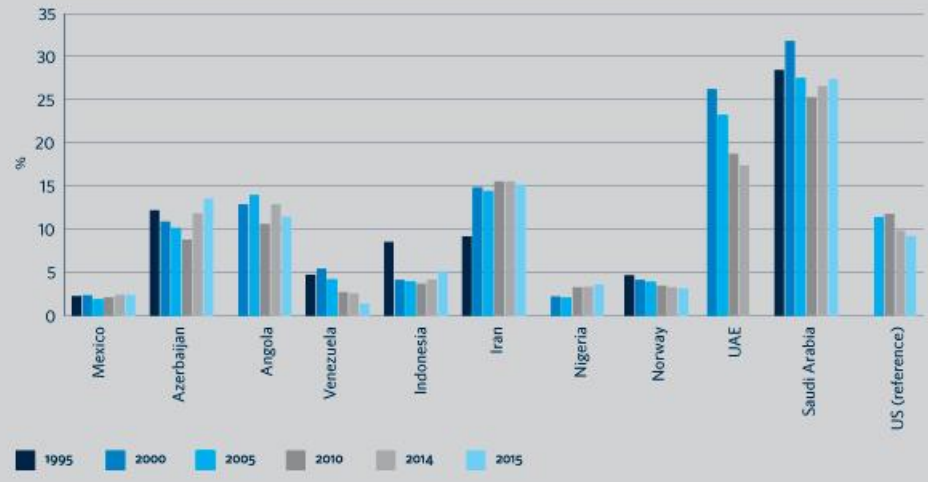
Sourse. The Heritage Foundation: The Index of Economic Freedom 2016.

Figure 22: **Child Mortality per 1,000 People, 2015**



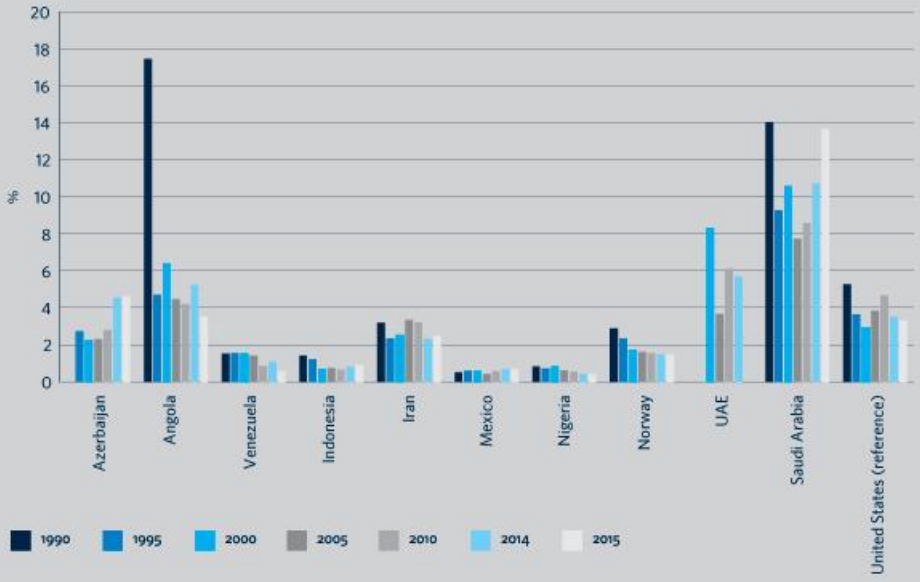
Sourse. World Bank.

Figure 23: **Defense Spending, as a Percent of Budget Expenditure**



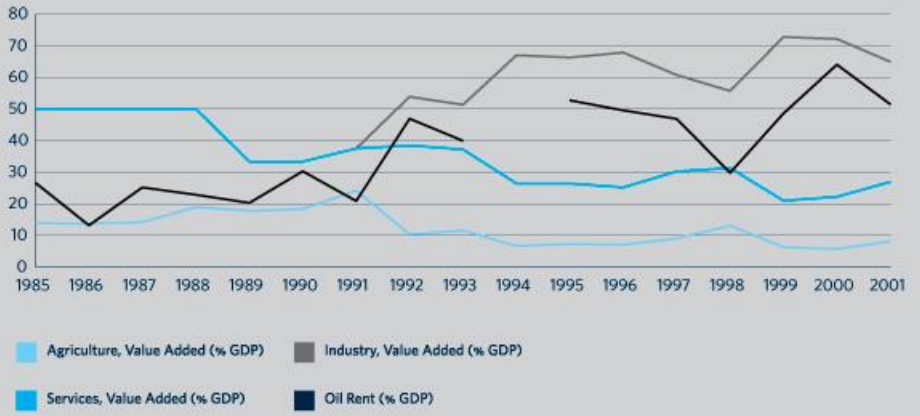
Sourse. SIPRI.

Figure 24: **Defense Spending, as a Percent of GDP**



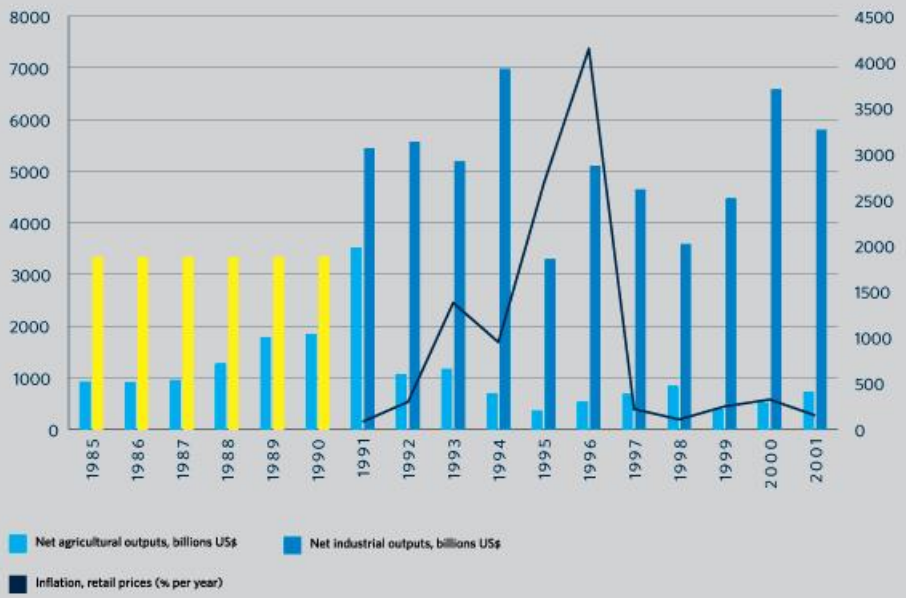
Sourse. SIPRI.

Figure 25: **Angola. GDP Structure and Oil Rent**



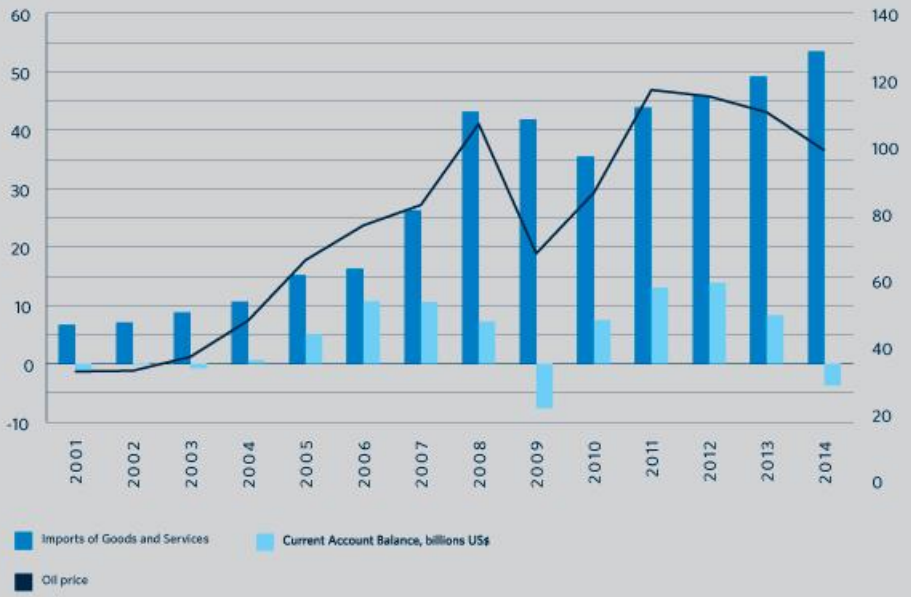
Sourse. World Bank.

Figure 26: **Angola. Net Agricultural and Industrial Outputs, Compared to Inflation**



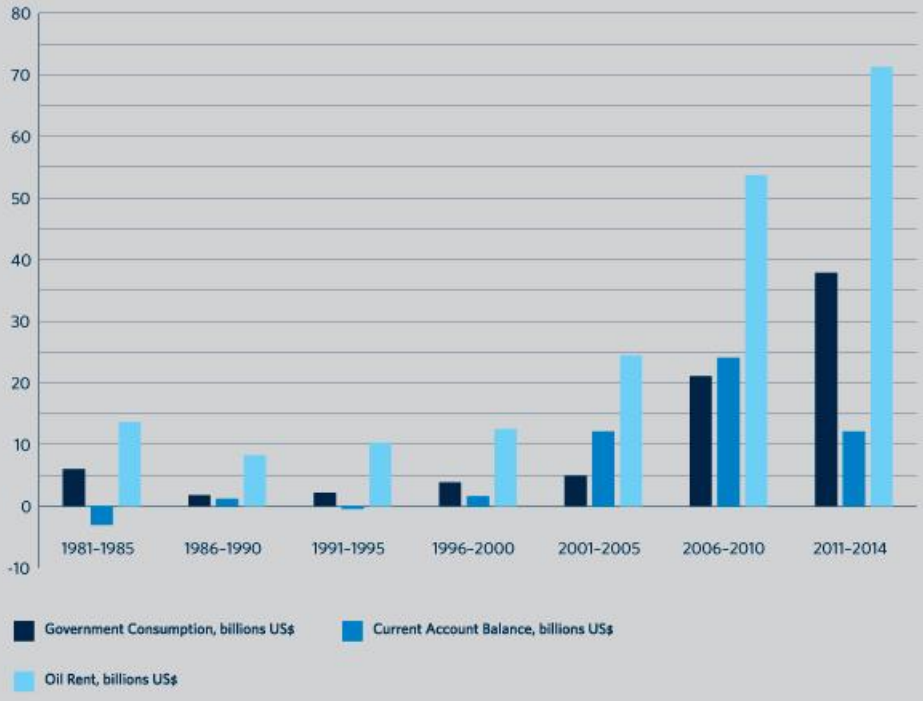
Sourse. World Bank.
Note. Yellow color indicates estimate of the World Bank experts.

Figure 27: **Angola. Current Account Balance, Imports of Goods and Services**



Sourse. World Bank.

Figure 28: **Nigeria. Government Consumption, Current Account Balance, Oil Rent, in Current Prices**



Sourse. World Bank.

Table 1: **Child mortality around the world, per 1,000 people**

Country Name	1985	1990	1995	2000	2005	2010	2015
Angola	228,3	226	224,8	216,7	204	183	156,9
UAE	22,7	16,5	13	11,1	9,8	8,5	6,8
Azerbaijan	101,1	94,7	94,3	74	51,7	39	31,7
Indonesia	103,1	84,7	66,7	52,3	41,4	33,1	27,2
Iran	77,4	57,5	45,3	34,7	25,7	19,2	15,5
Mexico	58,7	46,6	35	25,6	19,5	16,8	13,2
Nigeria	209,5	212,5	207,8	186,8	158	130	108,8
Norway	10,2	8,7	5,7	4,9	4	3,2	2,6
Saudi Arabia	69,1	44,3	29,7	22,9	19,7	17	14,5
Venezuela	36,1	29,6	26,3	21,7	18,5	16,6	14,9
World	101,2	90,6	85,3	75,9	62,6	51,7	42,5
OECD members	27,07	21,40	16,60	12,89	10,16	8,42	6,89
Russian Federation	30	26	26,4	23,2	16,7	12	9,6
Ukraine	22,7	19,5	20,5	18,5	14,5	11,8	9

Sourse. World Bank.

Table 2: **Net Migration per Five-Year Period**

Country Name	1982	1987	1992	1997	2002	2007	2012
Angola	234 149	(150 282)	142 811	(126 701)	172 594	85 286	102 322
UAE	175 581	260 931	326 830	484 452	1 180 000	3493 000	405 000
Indonesia	(49 566)	(166 738)	(381 823)	(344 962)	(851 310)	(1116 994)	(700 000)
Iran	1 969 420	1 344 377	(2276004)	615 293	(70 307)	(549 266)	(300 001)
Mexico	(1519 000)	(1535 834)	(1302868)	(1844707)	(2841190)	(409 596)	(523 585)
Nigeria	(671 640)	(91 407)	(95 769)	(95 027)	(170 000)	(300 000)	(300 000)
Norway	24 805	38 715	46 903	58 773	67 400	174 001	235 665
Saudi Arabia	1 391 626	590 900	(25 000)	60 187	945 000	815 000	850 000
Venezuela	1 373	891	(572)	(2 061)	(7 648)	(28 395)	(69 121)

Sourse. World Bank.

Table 3: **GDP per unit of energy use (constant 2011 PPP $ per kg of oil equivalent)**

Country Name	1990	1995	2000	2005	2010	2013
Angola	9,09	6,62	7,69	8,45	10,27	10,47
UAE	10,16	9,02	9,63	9,77	7,74	8,07
Azerbaijan	2,69	1,83	3,18	5,03	12,47	11,26
Indonesia	8,24	9,07	7,89	8,61	9,77	11,38
Iran	8,24	6,52	6,37	5,94	6,27	5,41
Mexico	8,77	9,17	10,55	9,82	10,34	10,45
Nigeria	4,36	4,03	4,05	5,47	6,81	7,05
Norway	8,72	9,39	10,08	10,95	9,07	9,86
Saudi Arabia	9,97	7,88	7,73	7,84	6,70	7,69
Germany	7,12	8,22	9,03	9,28	10,17	10,93
Japan	8,31	7,92	7,87	8,33	8,84	9,95
Ukraine	2,16	1,60	1,77	2,40	2,72	3,27
United States	4,83	5,08	5,71	6,34	6,89	7,36
Venezuela	7,25	7,26	6,88	7,11	6,64	7,79
World	5,52	5,83	6,43	6,80	7,32	7,63

Sourse. World Bank.