



Middle East Institute

December, 2011

Scholar Policy Paper

Middle East Institute

Crisis in the Yemeni Economy: a Troubled Transition to Post-Hydrocarbon Growth

By: Charles Schmitz

– In Memorium –

Dedicated to the memory of our friend and colleague
Chris Boucek, 1973-2011

YEMEN'S ECONOMIC TRANSITION

Yemen's political stalemate is destroying the economy. Violence and labor strife have shut down oil production, the central bank's foreign reserves are being drawn down, and the fighting, demonstrations, electrical outages, and fuel shortages have paralyzed local businesses to the extent that banks and money exchangers are refusing to buy Yemeni Riyal. Like rival mafia dons, Yemeni leaders seem bent on collective suicide to preserve their honor at the expense of the entire country. Their timing couldn't be worse. Just when the economy most needs firm guidance and leadership, the Yemeni elite are turning Sana'a into Beirut 1975.

In spite of the current political conflicts, Yemen will survive. In the medium term, the Yemeni economy is facing a transition away from dependence upon oil exports to a more diversified economy – a welcome development – but unfortunately the success of this transition is itself dependent upon the capacity of the state to manage the economy. Building a diversified economy based upon the variety of capacities that Yemen does possess will require effective coordination of scarce investment resources, strong bureaucratic capacity to manage state finances, political legitimacy to survive the macroeconomic shocks in the global economy, and the creation of trustworthy institutions. All of these will help develop nurture and development the Yemeni private sector – the key to any development project (Rodrik 2011, 1999). But just when the economy most needs effective leadership, Yemen's elite is locked in an internecine struggle that is going to take some time to stabilize, delaying any possible economic recovery. The immediate fears for Yemen's economy stem from the decline of oil and the scarcity of Yemen's natural resources, water in particular. Dwindling oil revenue is causing serious macroeconomic imbalances that could quite possibly see the collapse of the Yemeni Riyal as devaluation leads to spiraling inflation in prices of imported goods. This would be a short term crisis though, related to a crisis of confidence in the state. In the long term, successful economic growth is not dependent upon natural resource endowments. If natural resources were the basis of prosperity, Sub-Saharan Africa would be wealthy, not the poorest region in the world. Yemen's GNI per capita is still twice the Sub-Saharan average despite Yemen's scarce resources. As is evident from the African case, natural resources can actually be a curse (Collier 2010; Stiglitz 2006) and Yemen's recent economy exhibits some characteristics of an oil cursed economy: the weak bureaucratic capacity of the oil dependent state and growth in service and construction rather than in commodity producing sectors.

The vast majority of water in Yemen is a renewable natural resource whose source is the rain. However, deep well pumping technology has enabled Yemenis to draw down aquifers, essentially 'borrowing' on the future. FAO estimates very broadly that Yemen as a whole is drawing about 168% of its annual freshwater resources, so the rate of "borrowing" is quite high. Agriculture use alone consumes 90% of Yemen's water, so if agriculture can use water more efficiently there would be more water for urban consumption. And if water withdrawals are regulated and limited, aquifers will recharge at rates varying with local geology. The long term implication is that water is not so much running out as mismanaged and that the

solution to Yemen's water scarcity lies in state leadership and capacity, just as the economy requires effective state leadership.

INDICATORS OF DEVELOPMENT

Obviously this year will not be good one for the Yemeni economy. Prior to the political crisis, growth was forecast to be about 3.4%, but now the economy will shrink substantially. In the heat of the political crisis Ali Abdalla Saleh is accused of betraying the promise of Yemeni unity and there is no doubt that the Yemeni economy could have achieved far more had it been better managed, but the reality is that the Yemeni economy has achieved substantial progress over the last twenty years since Unity, not to mention since the establishment of the Republic forty years ago. In fact, in 2010 the Yemeni economy grew at 8% as a result of the new LNG exports.

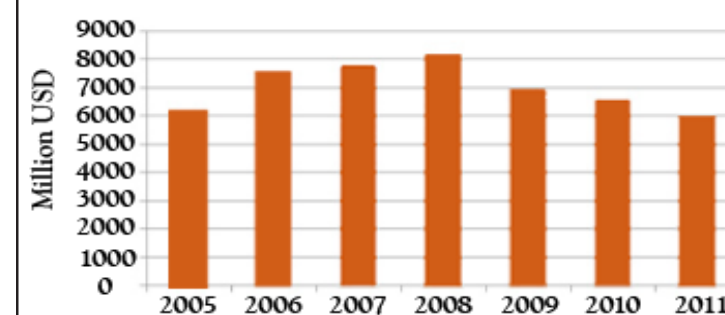
If we can rely upon the broad sets of indicators from the international development agencies, the Yemeni economy has made remarkable achievements, even in the last few turbulent years. GDP per capita has been slowly but steadily rising, in spite of high population growth rates, from \$400 per capita in 1992 to \$1,060 in 2010 (World Bank). It is often said that Yemen is one of the poorest countries in the world but in the groupings of the world's economies by the international development agencies, Yemen straddles the line between the middle and lower income groups, sometimes included at the top of the lowest income group (UNDP) and other times occupying the bottom of the middle income group (World Bank). In fact, Yemen's GDP per capita is higher than Kenya (\$760), Vietnam (\$930), Pakistan (\$1000), and not far from India (\$1220).

Although Yemen will fall short on its Millennium Development goals, its progress has been substantial. Life expectancy in Yemen has risen from 53 in 1995 to 63 years in 2009 (IMF 2009). The primary school enrollment ratio has increased significantly as well, from 51.7% in 1990 to 75.3% in 2004. Today 84% of Yemenis between the ages of 15 and 24 are literate, up from 50% in 1990. By comparison, the current number in Chad is 46%, in Benin 54%, and in Nigeria 72% (World Bank).

Yemeni infrastructure has been transformed as well from what it was in the 1970's. In 1970 few roads were even paved, but by 2001 there were 8,202 kilometers of paved roads and there are 13,768 kilometers of paved roads in 2009. Sana'a is now ringed by 16 over/underpasses built in the last ten years.

And while population growth rates have been famously high by world standards, they have fallen in the last ten years from 3.7% to 3.0% as is expected with the increasing development and urbanization that Yemen is experiencing (CSO 2010). Yemen has entered the early phases of its demographic transition.

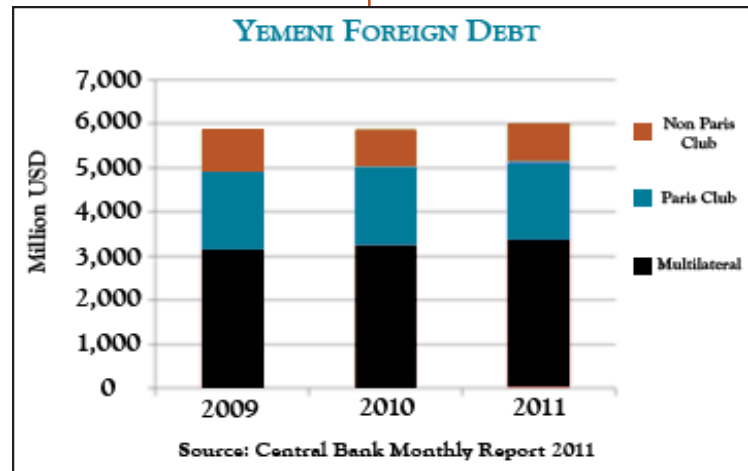
FOREIGN ASSETS OF THE CENTRAL BANK



Source: Central Bank Monthly Report Jan 2011

There are, of course, negative trends as well. Poverty has spread in the last year. Government spending significantly reduced poverty in the main cities in the middle of the decade (Poverty Assessment Report 2007), but with the recent decline in state revenue poverty has increased. Overall, proportion of people in Yemen living on less than \$1.25 per day is 42%, up from 37% a few years ago. No doubt the dislocations of the war in the north and the repression of the civil disobedience movement in the south have increased poverty as well. The current conflict in Sana'a will not help matters.

Still, Yemen's poverty is not particularly intense by world standards. Yemen's poverty rate is on a par with the South Asian average of 40% and below the average of Sub-Saharan Africa of 50% (World Bank). Mozambique's poverty rate is now 60%, down substantially from 82% in 1997. By comparison Yemen is not particularly poor.



Furthermore Yemen is not a highly indebted country. It does not qualify for the World Bank and IMF's Highly Indebted Poor Country program for debt relief. In the last decade Yemen enjoyed significant trade surpluses which it used to build a solid reserve of foreign currency as well as stay out of heavy debt. Yemen's debt is about 6 billion USD which amounts to about 20% of GDP, low by international standards. All of that

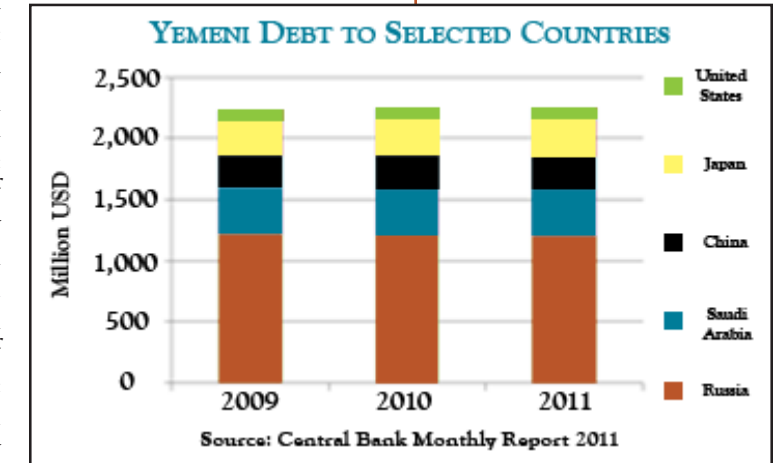
debt is public and about half is supplied by multilateral lending agencies and half to individual countries. Russia is the largest creditor of Yemen followed officially by Saudi Arabia, China, and Japan. The United States offers little direct credit to Yemen, though the US is a large contributor to the multilateral programs. Per capita aid to Yemen is also quite low by international standards.

SO WHY THE WORRY ABOUT THE ECONOMY?

The immediate concern in the summer of 2011 is the possible collapse of the Riyal due to the political infighting that has interrupted oil exports and is drawing down foreign reserves. (The riyal rebounded the morning after Ali Abdalla Saleh left the country for treatment in Saudi Arabia.) In the medium term, the Yemeni economy is very dependent upon oil and oil is running out.

Yemen's economic achievements since 1970 have been underwritten by two resource booms. The first was caused by the OPEC oil embargo in 1973 and the vast expansion of construction on the Arabian Peninsula that followed. Yemeni workers made up a substantial proportion of the Saudi construction industry. Remittances sent home from Yemeni laborers raised domestic incomes significantly and reoriented the Yemeni economy towards the importation and distribution of foreign consumer goods. Trade, transport, and commerce became the backbone of the domestic economy and agriculture declined.

When remittances began to stagnate in the mid-1980's the Yemeni economy entered a period of transition to an oil export economy. At first oil exports played only a small role in the economy, but one that was nonetheless critical in keeping the economy afloat. The remittance era was declared dead in the early 1990's when the Yemeni economy was punished by Saudi Arabia and the United States for Yemen's support of Iraq in the 1991 war. Saudi Arabia revoked the special status of Yemen workers and expelled some 800,000 Yemenis from the Kingdom in a matter of weeks. The United States cut all aid and withdrew the USAID mission in Sana'a. (Surprisingly, in absolute value remittances have actually remained steady over the years at about 1.2-1.5 billion USD rather than declining, but the growth of the Yemeni economy has reduced the relative macroeconomic importance of remittances. In microeconomic terms, remittances remain a very important source of supplementary income for many households.)



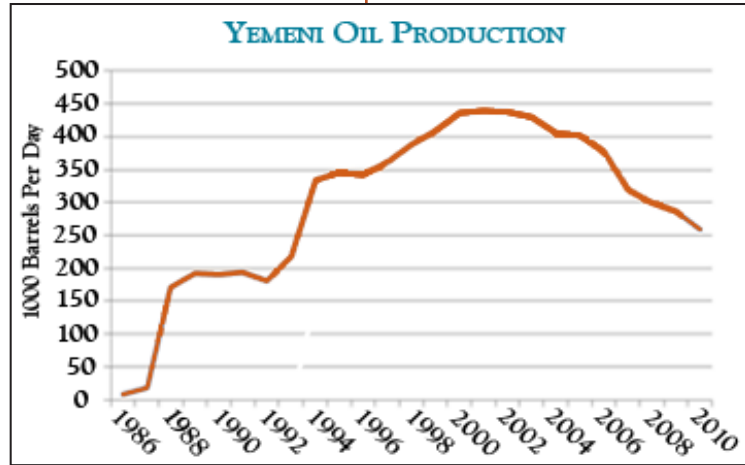
After Yemen's civil war, the Yemeni leadership entered an agreement with the IMF to implement a structural adjustment program as part of Yemen's effort to emerge from its isolation and reintegrate itself into the American led global economy. Yemen deregulated and privatized its economy and the IMF praised Yemeni officials for their diligent implementation of the program. Economic growth did follow the implementation of the IMF program, but not because of the policy changes. Instead, by the late 1990's oil production was driving economic growth and the Yemeni economy began a decade long dependence on oil exports.

OIL DEPENDENCE

Yemen was never a large producer of oil by global standards. By 1995 Yemen was producing about 350 thousand bbd and production peaked at about 450 thousand bbd in 2001, after which it began a slow but steady decline. (Saudi Arabia can produce 12 million bbd.) Yemen was fortunate though, that just as oil production began to decline, world oil prices rose steeply and cushioned the economic impact of the decline of Yemen's production. So while oil production was declining, revenues were still climbing. In the last few years Yemen oil revenues were tied more closely to the turbulent price of oil in the international economy than to production levels. Oil prices rose dramatically in the overheated years before the US banking crisis and then dropped precipitously with the global financial collapse. And now the fear of disruptions of oil due to political events in the Middle East has driven oil prices back up again.

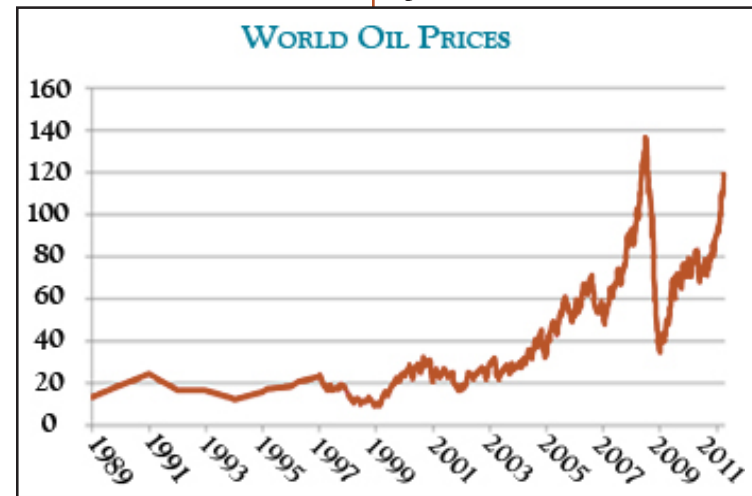
Oil transformed the Yemeni economy and state. From a small proportion of the Yemeni economy in the 1990's, oil grew to dominate exports, constitute about

a third of economic output, and contribute about 75% of the state's revenues. The period from 2000 to 2010 in Yemen will be remembered as the oil decade. Oil raised incomes and enabled substantial public investment that is reflected in the improvements in education, health, and infrastructure. During Yemen's oil decade about 20% of GDP was devoted to domestic investment (Central Bank of Yemen Annual Report 2010).



.....AND ITS CURSE

Oil had its negative impacts, though. One is that growth in the Yemeni economy was most rapid in communications and transport, and in commerce and trade, rather than in the commodity producing sectors. The recent decline of oil from about a third of GDP to about 10% of GDP left communications, trade, commerce, and transportation to dominate the Yemeni economy. Manufacturing declined from 13% of GDP in 1994 to 7% in 1999 and 5% through most of the oil decade (IMF 2001, p. 146 and CSO Statistical Yearbook 2010). Yemen experienced the same kind of outcome of other oil dominated economies suffering from the "Dutch disease" - declining importance of domestic commodity producing sectors - but for different reasons; Yemen's domestic industry is hampered more by a poor investment environment rather than the effects of a strong currency making domestic products uncompetitive.



GDP in 1994 to 7% in 1999 and 5% through most of the oil decade (IMF 2001, p. 146 and CSO Statistical Yearbook 2010). Yemen experienced the same kind of outcome of other oil dominated economies suffering from the "Dutch disease" - declining importance of domestic commodity producing sectors - but for different reasons; Yemen's domestic industry is hampered more by a poor investment environment rather than the effects of a strong currency making domestic products uncompetitive.

Another negative impact of oil was the atrophy of the state bureaucracy. The state came to rely upon easy oil income rather than develop its capacity to tax and regulate the economy. About 75% of state revenue came from oil during Yemen's oil decade whereas in the early 1990's it was only about 30% of state revenue. In the last couple of years the Yemeni state began working to develop sales tax collection and the local private sector began a political tug of war over the issue. The negotiations meant that the Yemeni regime recognized the importance of the Yemeni private sector and was working to find a way to incorporate private sector interests into the regime, but unfortunately the current fighting has side lined the whole issue.

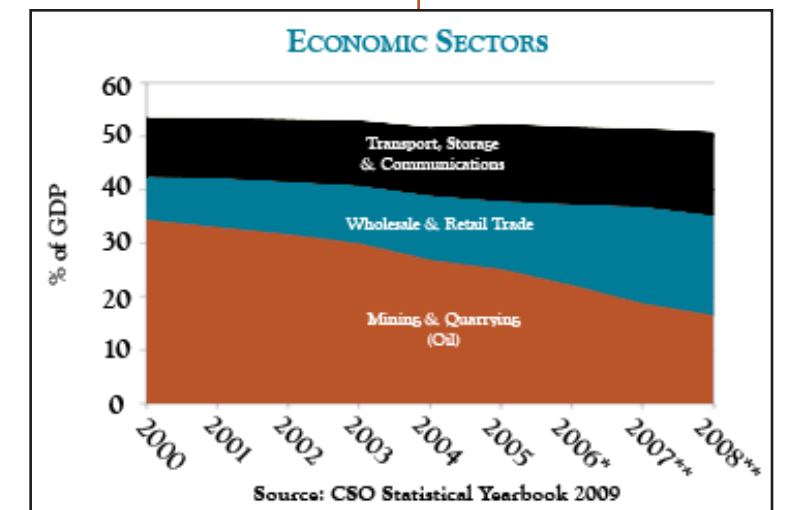
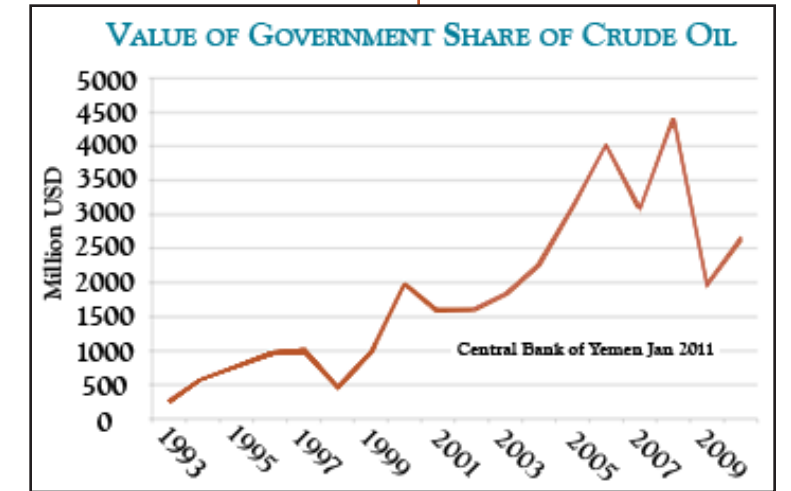
Fuel subsidies ate a considerable portion of the oil revenue. This is a clear example of an economic failure of Ali Abdalla Saleh's state. In 2008 when oil prices peaked at \$140 per barrel and the Yemeni state reaped record oil rents, fuel subsidies ate 40% of state revenues, meaning that billions were spent subsidizing Yemeni fuel consumption. Yemen spent its windfall on imported refined fuels. For years the IMF had been urging the Yemeni government to reduce subsidies

to domestic fuels and domestic food, but the Yemeni government resisted for several reasons. First, the Yemeni opposition exploited the issue for political gain. The ruling party split with its erstwhile ally, the Islah, in the parliamentary elections of 1997, and Islah began a new role as true opposition and organizer of the street. The opposition claimed that the government was not only causing harm to the average Yemeni by withdrawing subsidies, but more importantly that it had surrendered Yemeni sovereignty to the IMF. Riots broke out when ever subsidies were reduced. Second, smuggling subsidized fuel to African markets was a lucrative business. Some powerful people were getting rich on subsidies and the regime counted on the support of those benefiting immensely from smuggling. (Ali Abdalla Saleh recently responded to opposition charges of corruption by alluding to those who enriched themselves on African smuggling, naming Ali Muhsin and the al-Ahmar brothers.) Third, subsidies did actually reduce poverty though, of course, at great expense. The World Bank estimated that poverty would rise by 8% if subsidies were withdrawn and no other mitigating measures were taken. Had the Yemeni state had the legitimacy and capacity to target transfers to the poor and allow domestic fuel prices to rise to world market prices, many billions of dollars could have been used for productive infrastructure investments such as schools and power plants.

Now that oil is running out though, the positive and negative impacts of oil are going to disappear and this has most people very concerned about the Yemeni economy. While the decline of oil is a short and medium term concern, in the long term the Yemeni economy is transitioning to a more diversified economy. The future of Yemeni economy will not be dominated by any single resource like remittance or oil.

LIQUID NATURAL GAS

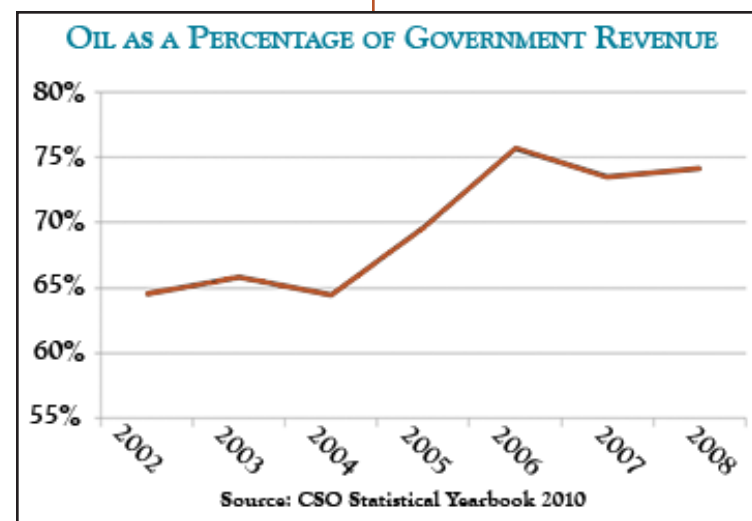
The LNG project at Balhaf is the biggest investment project ever in Yemen, but it will not replace declining oil revenues. Gas piped from the fields in the Marib region (across the former border of north and south Yemen) and shipped to far away markets is expected to produce about a billion USD per year for the Yemeni economy (current GDP is about 26 billion USD) and about 100 million US dollars in average annual tax income for the government for the next twenty five years (out of a current annual budget of about six billion USD). So while gas revenues will not dominate the Yemeni economy like oil did, gas revenues will



Source: CSO Statistical Yearbook 2009

make a significant contribution in the future.

Most of the revenues from the gas project will go to foreign investors, but the ownership structure of the project will give the Yemeni government two steady incomes in the future. Unlike oil where the government received a portion of the product in kind to sell (Production Sharing Agreements), in the gas project the government is an investor and will receive a portion of profits once initial construction costs have been paid off. The state's Yemen Gas Company is 16.73% owner of the project and the General Authority for Social Security and Pensions owns another 5% interest in the project. The government will also receive tax revenues that are progressive, starting at 25% and reaching 90% late in the life of the project.



AGRICULTURE, WATER, AND FOOD SECURITY

Many people suggest that Yemeni agriculture might play an important role in Yemen's post hydrocarbon economy, but agriculture's capacity to grow is quite limited. Agriculture is related to two critical issues in Yemen: water and food security. In general the relative weight of agriculture in the Yemeni economy has declined. Agriculture now accounts for about 10% of total annual output and about 30% of Yemeni labor works in agriculture. This is not unusual as development is usually accompanied by a move

away from agriculture in the economy. In the Yemeni case it is also a reflection of resource scarcity, primarily arable land, which is in turn dependent upon water. In standard development models rising productivity in agriculture lowers the proportion of labor involved, but in Yemen there is simply no more land to cultivate. If Yemen had water resources then more land could be brought into production, but water scarcity limits the expansion of agriculture.

Yemen is rich in water and arable land relative to the rest of the Arabian Peninsula, but that only means that Yemen is less desolate than some of the more desolate places on earth. The Ministry of Agriculture estimates that only about 3% of Yemen is cultivated but the extent of cultivated land varies considerably each year depending upon rains. In the last few years, Yemen's land under cultivation has varied between 1.3 and 1.5 million hectares out of a total area of 45.5 million hectares. In the United States about 18% of land is arable, in Morocco about 14%, and in Syria 28%. The rest of countries of the Arabian Peninsula have even smaller percentages of arable land than Yemen.

Although it really rains in Yemen unlike in the rest of the Arabian Peninsula, water is still scarce. Yemen today has one of the lowest per capita fresh water supplies in the world. This is a result of rising population and limited water supplies. Yemen's water comes only from the rain that falls in the highlands.

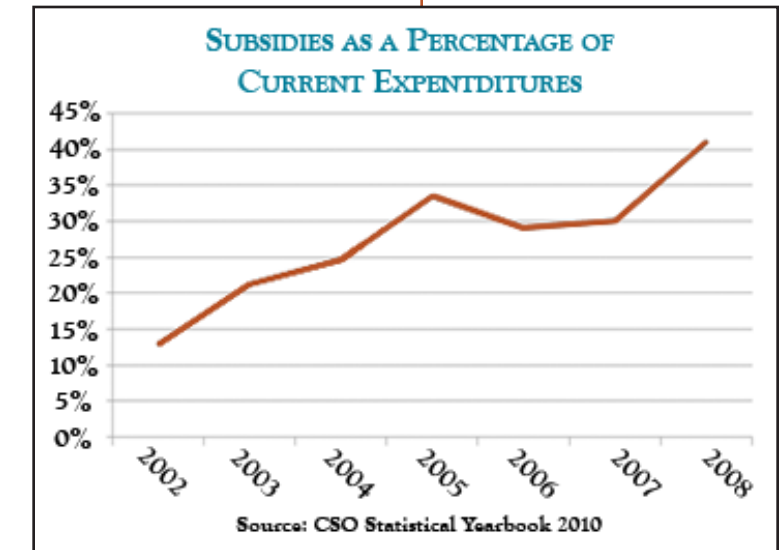
Yemen has no rivers bringing water from other areas such as the Nile in Egypt, the Tigris and Euphrates in Iraq or the Hindus in Pakistan. Yemen also does not have the luxury of great wealth to invest in desalination plants like the GCC countries. There are large fossil aquifers that have been discovered during oil exploration in the east, but these will only forestall the long term issue of managing limited water.

Agriculture uses 90% of Yemen's water. About half of Yemen's agricultural land is rain fed and the other half is irrigated. The Ministry of Agriculture indicates that 32% of the cropped area in 2009 relied upon wells whereas 17% relied upon flood or spate irrigation - water that flows down from the mountain highlands towards the sea in large washes that is then channeled into agricultural fields. Most of the rain fed agriculture is dedicated to cereals and sorghum is more than half of all cereal production. Sorghum is not only a drought tolerant grain but also a valuable fodder crop. Sorghum was Yemen's staple crop until rising incomes allowed imported rice and wheat become Yemen's staples. Today Yemen imports over 90% of its wheat and all of its rice.

The heavy dependence upon imports is a threat to food security. Food security does not mean self-sufficiency in food production, but it does mean secure access to food. National self-sufficiency makes no sense in an interdependent global economy where trade allows nations to take advantage of comparative advantages. It makes no sense for the UAE to grow wheat with expensive desalinated water. It is far more efficient to import wheat to the UAE. But the UAE is wealthy and oil exports give it plenty to trade for food, so the UAE is food secure though it has no agriculture. Yemen is not food secure because Yemen has depended upon oil exports to pay for food imports and oil exports are vulnerable. Although oil is running out, in 2009 crude oil still made up 84% of exports; rice and wheat were the second largest import item by value, about 10% of total imports, behind refined fuels, about 12%.

While Yemen's macroeconomic conditions would seem to suggest developing greater self-sufficiency in food supplies, the scarcity of water must also be taken into account. Economists have begun using the concept of "virtual" water which takes into account the amount of water needed for the production of an item. Water scarce regions logically should import items that require lots of water for production, rather than using their own scarce water to produce them - a kind of comparative advantage in water resources.

There is substantial room for conservation within Yemen's agricultural sector. The FAO estimates that water conveyance in Yemen is extremely inefficient. Yemen experiences extreme negative water balances, meaning that more water leaves the area than enters (and that there are no lakes), and as a result large



amounts of water are lost to evaporation or into the soil during conveyance in ditches or in flood irrigation. Using pipes and other irrigation means, particularly for permanent crops, would significantly increase water efficiency (FAO).

Qat is one of those permanent crops that would benefit from irrigation systems. Qat is not a narcotic, but a mild stimulant, used by Yemenis as a social medium, like a bar or a coffee shop. For farmers qat is a very important source of income. Returns on Qat per hectare are higher than any other crop, though vegetables are close to the per hectare value of Qat (Ministry of Agriculture 2009). Qat is cultivated on 10% of Yemen's agricultural land, uses about half of the water used in agriculture, constitutes about 3% of GDP, but accounts for a full third of total value of agricultural production. Fruit and vegetables were the next most valuable crops at 22% and 16% respectively. Qat only grows at higher elevations and Qat must be delivered fresh to the market the day of harvest, so Qat cultivation is concentrated around the highland urban markets, particular Sana'a and Amran governorates.

While there is room to improve water efficiency in Yemeni agriculture and some potential for expansion, there are clear limits to the growth of agriculture because of limited water and land. Agriculture, like LNG, will play a role, but not a dominant role, in Yemen's future economy.

OTHER NATURAL (AND HUMAN) RESOURCES

Yemen has many other resources that can be developed. Yemen is rich in minerals and commercially exploitable rock and there is already investment in the mining sector (World Bank 2007). There is the Port of Aden, a natural deep water port along a strategic water transportation route. The Yemeni highland's dry and temperate climate is a wonderful summering spot for wealthy GCC residents and Yemen's rugged mountains, scenic oases, and beautiful coastlines are attractive spots for tourism.

And of course there is still a large excess of Yemeni labor willing to go to great distances to work. Remittances have remained steady in the Yemeni economy at about 1.5 billion USD over the last twenty years and while remittances will not return to the importance they once had in the 1970's, there is still plenty of room for expansion. The GCC imports large amounts of labor and Yemen has a large excess of labor. The relationship between the GCC and Yemen is much like the relationship between the United States and Mexico, except that Yemeni nationals are more numerous than GCC nationals. The GCC is reluctant to significantly increase Yemeni labor, but their objections are largely political rather than economic. They claim that the labor force has changed and that unskilled Yemeni labor is not needed, except that there are still high rates of construction and there are plenty of low skilled labor opportunities in the service sector. There are already some small scale programs by the GCC to train Yemeni labor in Yemen and then give them jobs in the GCC. But the GCC is afraid of Yemenis because they are Arabs, they are culturally close to the GCC countries, and they come from a country that is a republic, has elections, and adheres to the idea of democracy, equal rights, etc. These are dangerous ideas to the GCC.

The monarchies and princedoms fear that Yemenis will make claims on the state, unlike Asian labor that has no intention of staying in the Gulf, and will upset the politically sensitive relationship between GCC nationals and the large number of immigrant laborers upon which the GCC depends. On this issue, the United States could actually play a useful leadership role in overcoming Gulf objections to Yemeni labor.

DOMESTIC MANUFACTURING AND SERVICES

The most important factor in Yemeni economic development is not however, natural resources or exporting its labor; it is stimulating domestic private and public investment. What we call development is a result of social organization, of human relationships. People create wealth. Of the classic factors of production – land, labor, and capital – Yemen has the first two in abundance, but is lacking in the third, capital. Capital is not a thing though, it is a social relationship. In order for Yemen to create wealth, to raise incomes, and to develop, social relationships in Yemen must be reoriented towards the creation of wealth.

Wealth comes from domestic social relationships – institutions that cultivate savings and investment - rather than the importation of foreign wealth in the form of FDI, or aid. FDI and aid can help, of course, but only in as much as they can be usefully absorbed by the domestic economy. A number of Yemen ministers have commented that one of the most frustrating experiences is to have aid resources but be unable to use them because the country lacks the social capacity to invest. This is because Yemen does not have the institutional framework for domestic investment, whether by foreign aid, FDI, or most importantly, domestic private savings. The Yemeni private sector is dominated by merchants who supply the country with imported finished goods. The biggest of these are tied to the Yemen regime through the awarding of supply contracts to the military or to the government. Domestic manufacturing is very limited and the majority of manufacturing is on a very small scale, serving local assembly, such as the metal workers that supply a myriad of construction needs in Yemen. There are only a few domestic manufacturers that compete with imported finished goods, mostly in food processing.

Rodrik (1999; 2011) has shown that since WWII, successful developing economies are those that can induce what he calls an “investment transition,” meaning a sustained period of high levels of investment. In all cases, these investment transitions are induced by a state that implements a coherent domestic investment plan geared toward increasing the productive capacity of the country. Coordination and sequencing of investments in key sectors of the economy are an important part of a national investment plan. It is not simply an increase in investment, but coordination of investment in key sectors that are designed to best increase the wealth of the country. In all of the cases examined by Rodrik, it was not foreign resources that developed the economy, but domestic resources. Stimulating the domestic private sector is the key to successful development, as opposed preparing the ground for foreign investors. FDI follows growth, it does not cause it. Foreign investors look to growing markets and opportunities; they do not look to transform institutions in a local economy. This is the job of the

local state in conjunction with the domestic private sector.

All of the above requires a large degree of state capacity. State must have qualified and capable personnel capable of managing and implementing a national economic program and a bureaucracy that can efficiently generate state revenues and then use them effectively. State capacity implies that social conflicts do not weaken the state's ability to implement its programs and that the state commands sufficient legitimacy to manage the inevitable disruptions that global integration causes. Yemen is experiencing a severe 'disruption' in the economy as a result of the forced transition away from its oil dependence. Had the Yemeni state effectively used the resource rents of the past decade and planned for the coming transition, the social impact would have been far less severe.

Thus the future success of Yemen post hydrocarbon economy is dependent upon the political success of the next regime to build an effective and capable state, rather than the size of Yemen's natural resource endowments. In as much as the next Yemeni regime can build trustworthy institutions and nurture a conducive domestic investment environment, the transition will be successful.

Collier, Paul 2010. **The Plundered Planet: Why We Must – and How We Can – Manage Nature for Global Prosperity.** New York: Oxford University Press. Food and Agriculture Organization http://www.fao.org/nr/water/aquastat/countries_regions/yemen/index.stm

International Monetary Fund. 2001. Country Report 01/61 April 2001

International Monetary Fund. 2009 Country Report 09/100 March 2009

International Monetary Fund. 2010. Country Report 10/300 September 2010

Republic of Yemen and the UNDP. 2007. **Poverty Assessment.**

Republic of Yemen. 2009 Ministry of Agriculture and Irrigation.. Agricultural Statistics.

Republic of Yemen. 2010. Central Statistical Organization. Statistical Yearbook.

Republic of Yemen. 2010. Ministry of Planning and International Cooperation and International Food Policy Research Institute. **National Food Security Strategy Paper.**

Rodrik, Dani. 1999. **The New Global Economy and Developing Countries: Making Openness Work.** Washington, D.C.: Overseas Development Council

Rodrik, Dani. 2011. **The Globalization Paradox: Democracy and the Future of the World Economy.** New York: W.W. Norton and Co.

Stiglitz, Joseph. 2006. **Making Globalization Work.** New York: W. W. Norton and Co.

United Nations Development Program. hdr.undp.org/en/

USAID 2006. **Yemen Corruption Assessment.**

World Bank International Finance Corporation. 2010. Yemen Country Profile: Enterprise Surveys.

World Bank. 2009. Project Appraisal Document for a Water Sector Support Project. Project No. 46801-YE

World Bank. data.worldbank.org



Charles Schmitz is associate professor of Geography at Towson University in Baltimore, Maryland where he has taught since 1999. Dr. Schmitz is a specialist on the Middle East and Yemen. He began his academic career as a Fulbright Scholar and American Institute for Yemeni Studies Fellow in Yemen in the early 1990's. Dr. Schmitz' current research interests include the political economy of development in Yemen, international law and the counter terror policy, international governance and failing states, and the sociology of contemporary Yemeni society.

Dr. Schmitz has been involved in the defense cases of several Yemeni detainees in Guantanamo, the most prominent of which was the case of Salim Hamdan who won the Supreme Court case against President Bush in 2006. Dr. Schmitz served as the translator and country consultant for the Hamdan defense team in the Office of Military Commissions from 2004 until 2009, during which he made more than fifty visits to Guantanamo.

Currently Dr. Schmitz is president of the American Institute for Yemeni Studies and a member of the executive board of the Council of American Overseas Research Centers. AIYS is the only American interdisciplinary academic organization active on the Arabian Peninsula. It is the primary link between the American academic community and the Yemeni government as well as the Yemeni academic community.



Middle East Institute

1761 N Street NW
Washington, DC 20036-2882

*The views expressed in this publication are those of the authors;
the Middle East Institute does not take positions on Middle East policy.*