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East Africa Oil and Gas: Silver Bullet or Complex Remedy.

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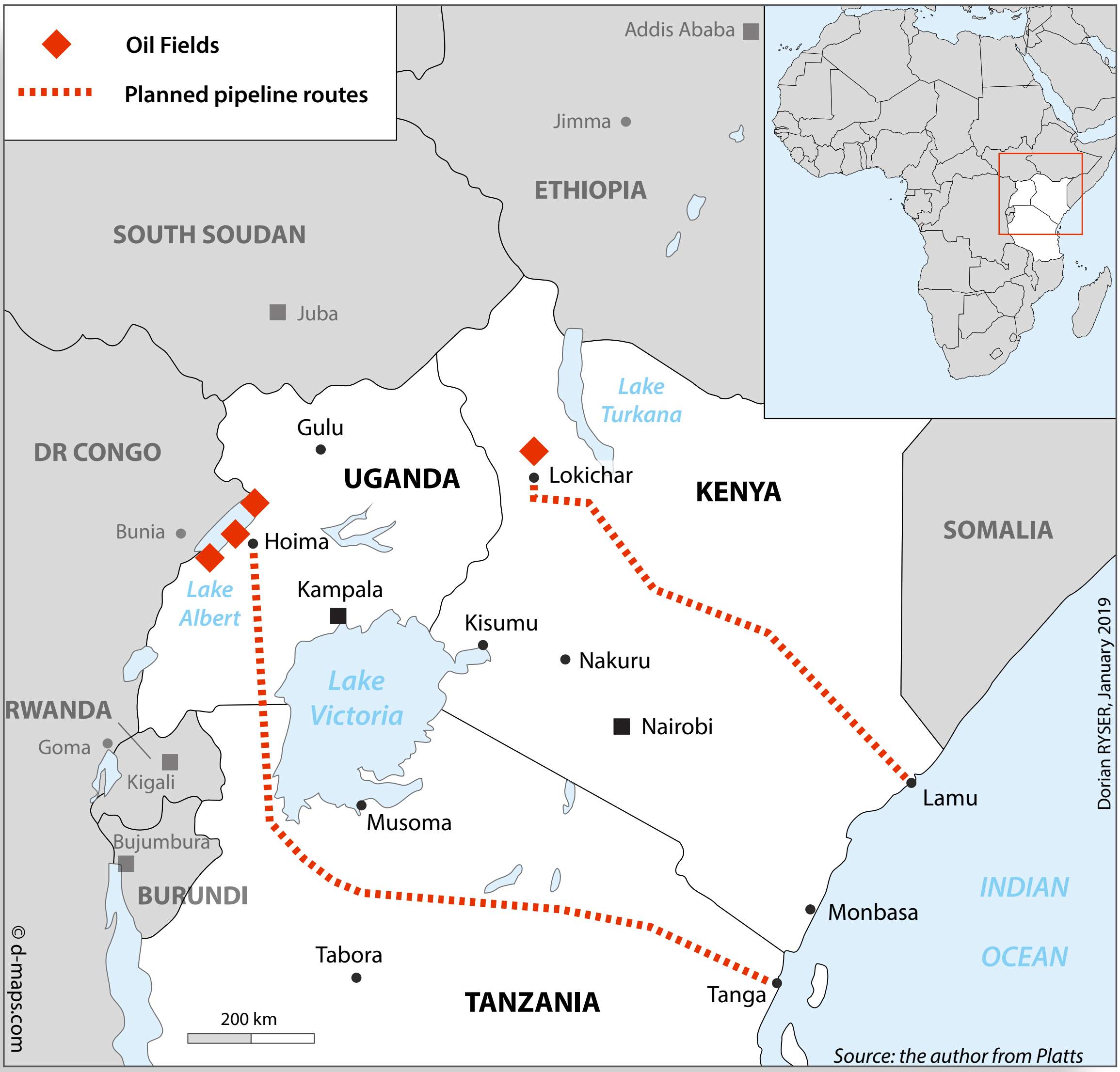
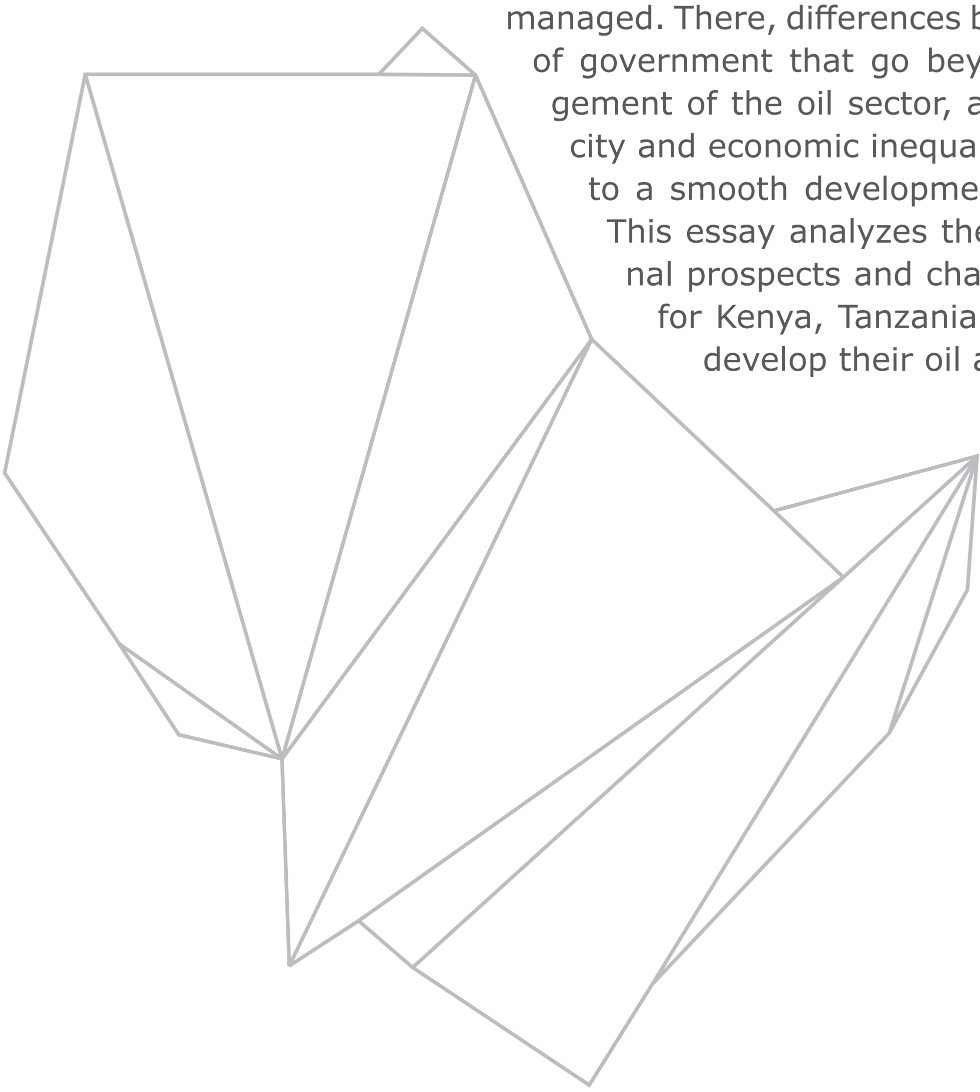


Abstract

East Africa has recently entered the global map of oil and gas exploration and production. Uganda and Kenya are about to become oil producers and Tanzania enlarged its endowment of world-class offshore natural gas reserves in recent years. Key to a successful development of the three countries´ hydrocarbons industry is completion of the infrastructure projects needed to monetize their reserves: mainly pipelines to carry landlocked oil to the coast for export and liquefaction facilities for transporting natural gas. The size, cost, and complexity of the projects pose great challenges to the development of the oil and gas sector. The quality of the sector governance in each of the three countries is also critical for securing a well-managed hydrocarbons industry, but unfortunately, challenges appear in the horizon. Oil decisions in Uganda and Tanzania are in the hands of a handful within the President´s inner circle with typically little transparency. This makes it difficult to make authorities accountable for their actions. In the case of Kenya, management of the oil industry is more decentralized and the oil producing region has an increasing influence on how the sector is being managed. There, differences between the two levels of government that go beyond the mere management of the oil sector, and touch upon ethnicity and economic inequalities pose a challenge to a smooth development of the oil industry. This essay analyzes the domestic and regional prospects and challenges that lie ahead for Kenya, Tanzania, and Uganda as they develop their oil and gas industries.



Introduction: Oil and Gas: The Path to Economic Growth

A generalized appetite for finding new oil and gas reserves as a result of increasing demand and high oil prices came together in the 2000-decade and placed East Africa on the global oil and gas map. After decades of failed exploration efforts, huge oil and gas reserves were found along the Rift Valley, in a geological formation that stretches across Uganda, Kenya, Tanzania, and Mozambique. Large onshore oil discoveries were announced in Uganda in 2006 and in neighboring Kenya six years later. Added to those finds, world-class natural gas found in 2010-2011 off the coast of Tanzania and Mozambique, turned East Africa into one of the most promising oil and gas regions of recent years.

Investments in East Africa's oil and gas industries are not only concentrated in the upstream (exploration and production), but considerable funds are also going to the midstream and downstream sectors (transport and refining). The region has an important shortage of infrastructure and for the new reserves to be commercially viable, large investments are necessary in new pipelines, refineries, liquefied natural gas (LNG) plants, export ports, and road networks, among others. Expectations are high that the new oil and gas discoveries will contribute to transforming the economies of Tanzania, Uganda, Mozambique, and Kenya, and in so doing, that the new resources will help improve the livelihoods of millions in the region. More revenues will also come as a relief to government accounts that are increasingly feeling the squeeze from demographic pressures and mounting debt. Natural gas from Tanzania's onshore fields is already feeding gas-fired power plants and expanding electricity access among the population.

This essay analyzes the development of the oil industry in Uganda and Kenya and the natural gas sector in Tanzania. The first section offers a quick summary of the institutional framework of the sector in each country; the second section explores the magnitude of the infrastructure needed to jumpstart the industry and the risks of it not materializing in time; the third part is an analysis of the impact of oil and gas on the political dynamic of each of the three countries.

East Africa's Oil and Gas Industry: An Overview

The discovery of oil and gas goes back several decades in the East Africa region as a whole. The nature of the findings, and their potential for generating domestic revenues varies considerably from country to country. In the three countries under review in this essay, the discoveries are relatively recent, and it is too early to predict their economic and political effects, particularly in view of large fluctuations in international supply and demand hydrocarbons markets.

Tanzania: From moderate natural gas producer to major world player

Tanzania has the more mature hydrocarbons sector of the three countries. It had already been producing moderate amounts of onshore natural gas for domestic power generation since 2004. Then in 2010, a major breakthrough took place with the discovery of huge offshore natural gas deposits. The new finds not only helped to boost domestic power generation, but also opened up the potential for the country to become a significant exporter. Current total natural gas reserves are estimated at 55.08Tcf, of which 47.08Tcf are located offshore and 8Tcf onshore, according to official figures (United Republic of Tanzania, 2016).

The offshore discoveries attracted some of the world's largest international oil corporations - US Exxon, BG (which later acquired Shell), Ophir, and Equinor (former Statoil) among others. The new finds came on the heels of similarly large gas discoveries in neighboring Mozambique in early 2010, which made Tanzania's new deposits particularly attractive for investors on the other side of the border. Tanzania is now a small gas player, but its vast discoveries and its proximity to profitable Asian liquified natural gas (LNG) demand markets could place the country among the world's largest natural gas producers. For that, Tanzania needs a major investment in the infrastructure that will enable the country to monetize its gas through exports.

The legal framework for the hydrocarbons sector has been evolving throughout the years and becoming less investor friendly. The industry is overall governed by the Petroleum Act of 2015 and the Oil and Gas Revenue Act of 2015, although new regulations adopted in 2017 incorporated new checks and balances, and an enhanced role for the State in the industry. Since then, the National Assembly was granted the authority to review existing contracts and to approve new ones (Woodroffe, Genasci, & and Scurfield, 2017). The new laws also incorporate local content requirements, and adherence to the principles of transparency, accountability, and equitable distribution of benefits. Potentially controversial is the legal provision that gives the government the ability of holding a lien on all extracted minerals, which opens questions about a company's ability to book reserves (Woodroffe, Genasci, & and Scurfield, 2017).

Upstream operations and LNG activities are regulated and monitored by the Petroleum Upstream Regulatory Authority (PURA), and the downstream is regulated by the Energy and Water Utilities Regulatory Authority (EWURA). Interested companies must form joint ventures with state owned Tanzania Petroleum Development Corporation (TPDC). In 2017, President John Magufuli announced that the Ministry of Energy and Minerals would be divided into two institutions to attend the energy and the minerals sectors separately (Ng'wanakilala, 2017).

Like in neighboring countries, in Tanzania the President is directly involved in decisions related to the development of the country's hydrocarbons industry, particularly since the arrival of Magufuli in 2015.

Uganda and Kenya: En route to becoming moderate oil producers

Uganda is the backbone of the newly-developing oil and gas industry in East Africa. Its 2,5 billion barrels of proved oil reserves (U.S. EIA, 2016) are modest compared to some of the continent's oil giants like Nigeria or Angola. But it holds the largest recently discovered oil reserves still to be developed. Considering the expanded East Africa's hydrocarbons-rich area—that stretches across Ethiopia, South Sudan, Uganda, Tanzania, Kenya, and Mozambique—only South Sudan's proved oil reserves are larger - 3.5bl barrels- (U.S. EIA, 2018), and as opposed to Uganda, the country is already producing.

Uganda is expected to produce around 200,000b/d from the Albertine Graben region, located to the West of the country (S&P. Global Platts, 2018), close to the town of Hoima, with initial production scheduled for 2021.That would put Uganda at par with mid-level African oil producing countries such as South Sudan, Gabon and Equatorial Guinea. The latter two are members of Organization of Petroleum Exporting Countries (OPEC), which Uganda hopes to join once it starts producing oil (Uganda Business News, 2017).

Oil exploration in Uganda dates back to the 1980s, but the first commercial discoveries were announced much later -in 2006-, in onshore and offshore deposits running north to south in the Lake Albert. Investor interest gradually picked up throughout the mid-2000s, stimulated by tax incentives, attractive oil prices, and an expanding oil industry in neighboring South Sudan. Chinese firm CNOOC was awarded the first production license in 2013, while its partners, French Total, and British Tullow Oil, received their production permits only in 2016, following much wrangling with the government over taxes and development plans. Then in 2017, two new companies signed exploration agreements, Australian Armour Energy and Nigerian Oranto Petroleum International. Uganda plans to export part of its crude production and sell the rest to the domestic and regional markets as processed products. For that, Kampala plans to build a refinery that is part of a larger oil industry development project.

Following the discovery of commercial reserves, the government carried out a detailed and quite structured development of the institutional framework that will govern the hydrocarbons industry. Uganda took years to draw the sector legislation, to negotiate licenses with investors, and to decide on the size of the refinery and the pipeline route to export its landlocked oil. The first step was to develop a vision for the sector that was stipulated in the 2008 National Oil and Gas Policy (NOGP) and provided the institutional and regulatory framework of the industry.

The Ministry of Energy and Mineral Development is in charge of oil policy, and the Petroleum Authority of Uganda (PAU) has a more regulatory role, handling compliance and monitoring throughout the hydrocarbons value chain. Uganda's National Oil Company (UNOC) deals with the government's commercial and participatory interests in the sector. Upstream operations are mandated by the Petroleum (Exploration, Development and Production) Act of 2013[1], which regulates licensing and private participation in Uganda's petroleum sector. Downstream and midstream activities are guided by the Petroleum (Refining, Gas Processing and Conversion, Transportation and Storage) Bill of 2012. Also, the Oil and Gas Revenue Management Policy 2012 offers management guidance of oil revenues.

In spite of this impressive legal framework, in practice it is the President that has the last word in matters related to oil, as we will see later.

Kenya reached a milestone in 2018, when it became the first East African country to transport oil from landlocked production fields to the coast for export (Kiplang'at, 2018). A few thousand oil barrels were transported by truck across the country to the Indian Ocean coast, in what was meant as a symbolic act to show President Uhuru Kenyatta's fulfilment of his promise to turn Kenya into an oil producer. In practice, however actual production in exportable quantities is not expected until 2021-22, and it is projected to be around 60,000b/d to 80,000b/d (Tullow Oil, 2018). As it happens, carrying the crude to the coast by truck is not a sustainable long-term option due to high risks and costs, so Kenya will need to build an oil export pipeline instead.

Kenya's initial oil exploration goes back six decades, with long periods of low activity and no significant success. Renewed company interest grew in recent years, attracted by the proximity of large oil and gas discoveries in neighboring countries and by high oil prices. One of those companies was Tullow Oil, which six years ago was the first to discover oil in Western Turkana, close the town of Lokichar. Recoverable oil reserves there are estimated at 750 million (and potentially one billion) barrels (Tullow Oil, 2018). Like almost everywhere else in the world, the drop in oil prices in 2014 resulted in a scale down of exploration activities and sometimes even withdrawal from operations (Daily Nation, 2015). For the moment, Tullow's Turkana oil operations are the most advanced.

There is still much optimism that investors will strike additional oil and natural gas in Kenya in coming years. Evidence of that hopefulness is the recent acquisition by French Total of equity in the Turkana oil blocks (Reuters, 2018). The arrival of Total to Turkana's oil operations could be a game-changer for Kenya. Total is one of East Africa´s largest and most experienced operators,

1. It repealed an older law -the Petroleum Exploration and Production Act of 1985- that guided the initial stages of Uganda's oil industry development.

with upstream and downstream assets in Uganda, Tanzania, South Sudan, and now Kenya. Also, in recent years, some of the world's top corporations started exploring Kenya's maritime coast for natural gas, with the expectation that neighboring Tanzania and Mozambique's world-class offshore gas reservoirs may spread to Kenya. Among them, not surprisingly, are those that already discovered gas in Tanzania and Mozambique and hope to do the same in Kenya[2]. But unless new oil and gas reserves are found, Kenya is envisaged to be among the world's smallest producers.

Approval of the Petroleum Exploration, Development, and Production Bill of 2015 is required before Kenya can start small scale oil production. But the so-called Petroleum bill is still pending in Parliament. The bill will replace dated hydrocarbons legislation and will provide the regulatory framework for the upstream and downstream industries.

As opposed to Uganda and Tanzania, Kenya´s adoption of Devolution since 2014 means that subnational governments, and not just the President, are active decision-makers in the oil industry. More on this is discussed in the third section.

2. Companies exploring for offshore gas in Kenya include BG Gas, which found gas in Tanzania, and Anadarko, Eni and Total, all of which have operations in Mozambique.

Infrastructure is Crucial for the Success of East Africa's Hydrocarbons Industry

The outcome of East Africa's oil and gas industry is heavily dependent on the associated infrastructure that needs to be built. In order to monetize their landlocked oil reserves, Uganda and Kenya need a pipeline to the Indian Ocean for exporting their production. In the case of Tanzania, it needs an LNG plant to be able to export its large offshore gas reserves. This section will describe some of the infrastructure projects that need to be built, and some of the key issues they raise.

A complex and costly network of infrastructure projects

Since natural gas was discovered in 2004, Tanzania has been gradually adapting its generation, transmission, and distribution infrastructure to be more gas-dependent, with the idea of eventually expanding electricity access from the average 33% of the population calculated in 2016 (The World Bank, 2018). Peak electricity demand could go up by more than 90% in twenty years as a result of Tanzania's projected population and economic growth (Center for Science and Environment, 2018).

The government hopes its onshore gas fields will be enough to meet increasing domestic electricity demand through gas for power generation, leaving offshore reserves for export. Tanzania secured loans from development institutions -such as the World Bank, the African Development Bank, and East Africa´s Trade and Development Bank (TDB)— to build gas-fired power plants and from China for expanding the pipeline network that carries the gas from onshore fields (Bishoge, Zhang, Mushi, Suntu, & Mihuba, 2018). But more infrastructure will be needed in coming years, and President Magufuli has made repeated calls for private investor participation. In practice, however, the government tends to hold large stakes in energy projects, and experts suggest there is a degree of "antipathy" on the part of the Executive towards the private sector (Eberhard, Gratwick, & Kariuki, 2018), that is thought to create mistrust among potential large investors in the industry.

In order to monetize its offshore natural gas reserves Tanzania needs to tap export markets. For that, an LNG export terminal will be built in the southern Lindi region. In 2014, a consortium[3] of international companies agreed to jointly build the U$30billion facility in partnership with state owned TPDC. But the project has been much delayed and now government officials say construction will only start in 2022 (Kamndaya, 2018).

In the case of Uganda, it is a landlocked country and in order to export its oil it relies on neighboring Kenya and Tanzania, which have an outlet to the Indian Ocean. After years of deliberations and much back and forth, Uganda finally decided on a pipeline route across Tanzania to export its crude, rather than one ending in Kenya's Lamu port (The State House of Uganda, 2016). The so-called East Africa Crude Oil Export Pipeline (EACOP) project envisions construction of a 1,455km pipeline that will run from Uganda's oil fields in Lake Albert to Tanzania's Tanga port on the Indian Ocean. Negotiations between the government and the companies operating in Lake Albert -Total, CNOOC, and Tullow- are still ongoing for building the US$3.5 billion project, which is intended to be a private-public partnership endeavor. The pipeline will need to be electrically heated along its entire route to ease the flow of Uganda's high-density oil.

Building the pipeline through Tanzania is expected to be more cost-effective and faster than going through Kenya. One reason being that Tanzania's Tanga port already exists and only has to be upgraded to handle more traffic, while Kenya would have had to build a completely new port in its coastal town of Lamu, where the pipeline was to end. Another reason for favoring Tanzania was that the government there owns most of the land that the pipeline route will traverse. By contrast, the authorities would have had to acquire private land in Kenya and engage in what are typically lengthy and cumbersome compensation negotiations with land owners (The Guardian, 2016). Lastly, security was also important in tilting the balance towards Tanzania because of fears that a pipe across Northern Kenya, close to the Somalian border, could be targeted by the al Shabaab militants that operate in that country[4].

3. The consortium includes ExxonMobil, Equinor (former Statoil), Ophir, Shell and state-owned Tanzania Petroleum Development Corporation (TPDC).

4. Author interviews with private sector representatives.

Uganda also plans to build a 60,000b/d refinery that will serve the domestic and regional markets. The US$3-$4 billion refinery will be built by private investors, including a subsidiary of US General Electric (GE), in Western Uganda. Kenya and Tanzania are supposed to buy stakes in the refinery, as part of a commitment among member states of the East African Community (EAC) to try to facilitate financing of projects that benefit the trade bloc. Kampala's laborious decision-making process for both the pipeline and the refinery, in which President Yoweri Museveni was directly involved, delayed East Africa's oil and gas industry development by several years.

Uganda's choice of Tanzania as an export route for its crude had a high cost for Kenya, a much smaller oil producer whose Turkana oil resources are also landlocked and far from the coast. Nairobi had hoped that an oil export alliance with its neighbor would help attract financing for building a joint export pipeline. Mostly affected by Uganda's choice of Tanzania and by the lengthy decision-making process was Kenya's President Uhuru Kenyatta, who was unable to fulfill his wish of showcasing his country's first oil shipments to the coast prior the August 2017 presidential elections. Kenyatta was only able to meet his dream after being reelected but only symbolically, when a few oil barrels were trucked to the coast from Turkana amidst much fanfare.

Kenya is now on its own to build an 850km pipeline from its oil reserves in Turkana and an oil export port in Lamu. Construction of the 32-berth deep sea port is already on its way and is estimated to cost US$5 billion. The pipeline is in its early design stage. Like Uganda, Kenya's oil is waxy so the pipeline will have to be heated to make transportation easier, making it more costly. Oil company Total may contribute financing for the pipeline (Omondi, 2018). Supporting infrastructure include railway lines, airports, and highways, as part of a larger regional project –known as Lamu Port, South Sudan, Ethiopia Transport Corridor (LAPSSET)—aimed at deepening infrastructure connections within East Africa (LAPSSET, 2017).

See the map p.4 at the beginning of the note.

Yet, with estimates of Kenya's future domestic oil production at only around 100,000b/d at its peak, it may not be enough to make the pipeline commercially viable (Tullow Oil, 2018). Recent developments however, may have opened up new options for Kenya. Earlier this year, Total obtained Kenya´s government approval to acquire a 25% share of Maersk Oil´s Kenya assets. In exchange, the French oil major committed to contributing to Kenya´s pipeline project. With the purchase of oil assets in Kenya, Total became a major player in the three countries -Uganda, Tanzania, and Kenya— and finding a cost-effective export route for its resources is a major concern for the company. So much so that Total has reportedly started to float yet another option, a totally new idea,: to export Kenya´s oil through the Uganda-Tanzania pipeline[5]. This new alternative seems to be still speculative at the moment, and it is unclear where it would leave the Kenya-Lamu pipeline project.

After loosing out to Tanzania, Kenya was forced to completely change its plans for its hydrocarbons sector development. Originally, the government of Kenya had promoted the country as a hub for transporting oil from Uganda and possibly South Sudan and Ethiopia to its coast. Kenya's plan of becoming the core of the region's oil transport system was reasonable, considering the country is strategically positioned to supply Asia and India, where oil and gas demand is projected to grow in the next 20 years. But Uganda's preference for Tanzania doomed Nairobi's strategy.

Much is at stake when dealing with such large and complex infrastructure projects. Decisions on infrastructure routes in particular can have a considerable impact on the associated development throughout large stretches of territories, as well as on regional geopolitical alliances. Clearly, for a region with worrisome levels of public debt (IMF, 2018), jumpstarting the oil and gas industry can add an additional strain on debt sustainability and on the financial equilibrium of countries in the medium to long-term.

High Financial and Sustainability Risks

The successful development of East Africa's hydrocarbons industry hinges on the timely completion of the infrastructure work associated with it. There are three projects in particular -the Hoima-Tanga pipeline; Tanzania's LNG plant; and Kenya's pipeline from Turkana to the coast- that are key. The size of the projects, their complexity, the costs involved, all pose risks to the sustainable long-term development of East Africa's oil and gas industries. The following is an analysis of the risks involved. It focuses on these three projects.

For Uganda, an obvious challenge will be possible setbacks in the construction of what will be the world's longest heated pipeline that will transport the crude from the Lake Albert to the Tanzanian port of Tanga (Pipeline & Gas Journal,

5. Author discussions with private sector representatives.

2017). Apart from possible technical glitches, issues such as land acquisition and resettlements, as well as environmental and social impact assessments along the length of the line will have to be completed in parallel with construction the pipeline. Delays in finishing the pipeline would directly affect the development of oil production and the startup of exports. In this scenario, the financial viability of the project could be challenged, Uganda's public debt burden could be further deepened, and the country's ability to continue financing its development program could be severely impacted.

Since oil discoveries were announced in 2006, development of Uganda's oil industry was characterized by extremely long negotiating sessions between the oil companies and a small government inner circle of technicians and politicians. The secretive high level negotiations were more often than not, presided over by President Museveni himself. Industry insiders highlight high levels of technical expertise among Ugandan negotiators, an uncommon attribute in the region[6]. That, together with Museveni´s personal involvement in the nitty gritty of negotiations, and his fervent defense of his country´s interests *vis-à-vis* companies´ demands led to long and heated negotiations. Two of the main issues of contention included Museveni´s preference for a large refinery —rather than the medium or even small size plant promoted by private sector actors; and oil operators´ demand for being able to access international arbitration —instead of local courts— in case of disputes.

CNOOC received the first ever production license granted by Uganda in 2013, seven years after the discovery of oil was announced. Tullow and Total had to wait even longer, until 2016, to get their production permits (Patey, 2017). Unfortunately, a tax dispute between the government and Tullow created new hurdles since then. Production of first oil originally scheduled for 2020 has now been moved back to 2021 (Energy Monitor Worldwide, 2018), with some analysts touting 2022 as a more realistic date (Fitch Solutions, 2018). Delays in jumpstarting its oil industry will upset Uganda's economic growth projections of 6.1% of GDP per year in 2022-2023, up from pre-oil averages of 5.5% for 2019-2012 (EIU, November, 2018).

In Tanzania, construction of the LNG plant is stalled, and with it, the development of the country's natural gas industry. Given the expected high costs of developing its huge deep-water gas reserves, exports will be the only way

6. Author talks with oil company representatives.

of making them economically viable. For that, Tanzania needs to build an LNG export facility. Building the LNG terminal is expected to take five years, and any interruption puts Tanzania's whole natural gas industry prospects at risk. The original proposal was to start the U$30billion LNG plant by Q1 2017 with completion scheduled for 2024, but that is unlikely (Oirere, 2018). Differences between the government and the LNG consortium on new legal requirements have delayed the project. The disagreements reportedly center on fiscal terms, domestic supply obligations, local content requirements, and the expanded role of the State in hydrocarbons projects, among other issues (Fitch Solutions, 2018). Some observers believe that more government participation in upstream and infrastructure may make Tanzania less interesting for investors, which could jeopardize the likelihood of the country's natural gas industry (Bofin & Pedersen, 2017). At the time of writing, Exxon was reported to be looking for buyers for its Tanzania natural gas assets (Bousso & Vukmanovic, 2018)

Profit margins for Tanzania's LNG are also small under the current project economics parameters and with the stricter fiscal and other terms introduced by the new legislation. Unless project economics change, Tanzania LNG might end up being unprofitable, which would significantly reduce chances of attracting much-needed investments (Scurfiel & Manley, September, 2017). An additional risk comes from international markets because a drop in LNG prices or in demand could also impair Tanzania's LNG dreams. Particularly concerning is the increasing global competition for selling to Asian LNG markets, and added supply from new LNG projects in North America and Australia.

Kenya is moving fast in search of private funding to build the estimated US$-2billion pipeline that will bring its landlocked oil to the coast for export. Funding of the 850km pipeline will be shared by the consortium developing the oil reserves and the government, under still to be defined equity percentages. Government officials were recently at the London Stock Exchange sounding out possibilities for raising capital (Energy Monitor Worldwide, 2018). The government has already singled out a company to design the line, and construction is expected to begin in 2019, with completion scheduled for 2021, in time for when oil production comes online.

Kenya is smart to get an early start in finding possible investors for its Turkana-Lamu pipeline because it will likely have to compete with Uganda and Tanzania for *their* pipeline project. Total's recent endorsement of Kenya's pipeline was well received. But since the company has assets on both sides of the border -in Kenya and in Uganda-, it is possible that creditors may decide to spread risks by lending to the company in equal amounts for both pipeline projects. In that case, Kenya could come out short of the needed financing.

A second scenario that could threaten construction of Kenya's pipeline is one where low oil prices hindered the economics of the project. If construction of the pipeline were to be delayed, Turkana oil would need to be carried to the coast by truck, which could impact the timing and risk premiums of the deliveries, with costly outcomes. Lastly, the IMF warning that Kenya may not be able to meet its external debt payment commitments (Nord & Amos-Casero, 2016) raised fears of a possible risk of insolvency. Kenya's failure to meet its debt obligations would complicate the country's chances of borrowing capital for its pipeline at reasonable rates.

East Africa's Oil and Gas: Navigating Domestic Politics and Regional Geopolitics

The development of the oil and gas industries in East Africa is a good example of the extent to which elite dynamics within the government permeates decision-making in the oil industry. And those domestic decisions have a direct impact on regional geopolitics. The power of elites and coalition building to shape institutions at home, particularly in the extractive sector has been widely studied (Acemoglu & Robinson, 2012). The first part of this section gives an overview of this phenomenon inside Kenya, Tanzania and Uganda. The second half will analyze how oil and gas influenced East Africa's regional dynamics.

Domestic Oil Governance: Distinctive Features

Management of the oil and gas sectors in Uganda and Tanzania is highly centralized. Less so in Kenya, where institutions are relatively more autonomous. Uganda is perhaps the extreme case, with President Museveni himself negotiating oil contracts directly with private companies in confidential meetings[7]. In Tanzania, the 2017 revision of the hydrocarbons legislation incorporated a more active role for the government in approving the required steps leading to the granting of gas licenses.

Since the 1990s Uganda embarked in a process of decentralization. In practice, there has been a gradual departure from decentralization in recent years, and an increasing role of the central government in subnational affairs. Today, decentralization serves as a system of patronage through resources flowing from the central government along ethnic and political lines, to ensure lower level political and popular support of the President (Green, 2010). It is common for the government in Kampala to create new districts and fill subnational political positions with loyalists[8].

7. Author interviews with private company representatives.
8. The number of new districts more than doubled --from 38 to 132-- between 1991 and 2012.

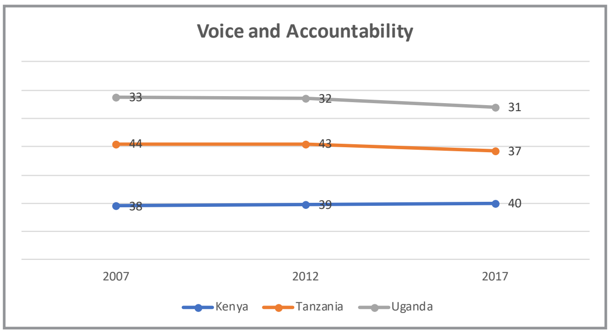
The patronage system is said to have deepened after oil was discovered, particularly among members of Museveni's inner circle of decision-makers, who seek to capture future oil rents (Hickey & Izama, 2016). Following the discovery of oil, the government became increasingly hostile to outside voices, and decisions on oil management remain in the hands of a small group of individuals in the administration (Vokes, 2012), some of them family members. In the producing region, the discovery of oil exacerbated old ethnic tensions around land. The Bunyoro ethnic group that lives in the oil region presented lawsuits against the central government for what it considered to be illegal oil exploration in its territory. They also demand a higher share of future oil revenues and jobs for the local population in oil-related developments.

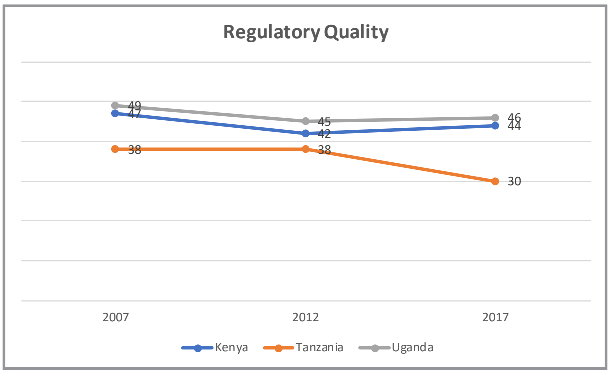
Similar to Museveni, Tanzania's President Magufuli increasingly shows signs of attempting to consolidate his power base through more control of the extractives sector. He replaced previous management of the hydrocarbons industry with loyalists and established a Parliamentary committee to review gas contracts granted by his predecessor. He also used historical discontent with the extractives industry to portray companies as evil and as an excuse to regain control of the sector (Jacob & Pedersenc, 2018).

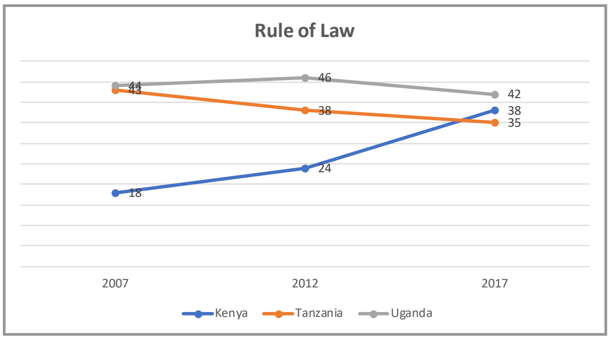
Without belittling Magufuli's intentions in cleaning up the sector of past corruption, in so doing he manages to gain popular support for his amplified control of the hydrocarbons industry (Paget, 2017), which was strengthened by the recently revised petroleum laws. The new legislation gives the President and the Minister of Energy much freedom and discretion in deciding on matters related to the industry (Lee & Dupuy, 2018).

In Kenya, oil decisions are generally more institutionalized, and less centered on the figure of President Kenyatta. Although that situation could change. The process of devolution launched four years ago gave sub-national governments more political and economic power. As a result, the Turkana oil region is gaining influence over management of the oil sector. Transportation of Kenya's first ever oil barrels from Turkana to the coast had been planned for early 2017, with a big ceremony to mark the event (Herbling, 2018). But it got delayed, initially due to electoral squabbling prior to the August 2017 presidential elections. Subsequent delays were due to disputes about the share of oil revenues to allocate to Turkana communities under the Petroleum Bill being discussed in Parliament. At the urge of their governor, Turkana communities blocked passage of the trucks carrying the oil to the coast until the stake of Turkana communities in the oil revenues was increased in the draft legislation. The Turkana governor has been one of Kenyatta's most fervent critics and they have both been at loggerheads for years on the legal framework of future oil revenue allocation. As mentioned earlier, the law required the Petroleum Bill to be in place prior to the trucking of the oil but this was not possible due to differences between the governor of Turkana and President Kenyatta. In the end, both men reached a verbal agreement to break the impasse, and the trucks carrying the oil finally departed from Turkana, even though the legal framework for the industry remains jammed in Parliament (Letting, 2018).

In all three countries, management of the oil and gas industries is characterized by very weak governance indicators. The following graphs show historical rankings for each of the three countries with respect to three World Bank governance indexes. The ranking goes from 0 to 100, where the highest number is the best. All three countries ranked very low in the Rule of Law indicator, with Kenya showing the most improvement. Neither country showed much progress in its regulatory quality throughout the years, in fact Tanzania's worsened slightly. The Voice and Accountability indicator has neither improved nor worsened throughout the years for each of the three countries.







Source:
Compiled by the author with data from the World Bank Worldwide Governance Indicators

East Africa's hydrocarbons sector is characterized by political discretion in decisions, much opaqueness, and generalized corruption. Only Tanzania made efforts to improve its transparency record by joining in 2009, the Extractive Industries Transparency Initiative (EITI), the global standard for good governance in the extractives sector. Progress was satisfactory, although there is still room for improvement, particularly with regards to granting licenses and to revenue allocation (EITI, 2018). Two years ago, Tanzania's National Audit Office reported inefficiencies during natural gas offshore licensing rounds (National Audit Office, 2016). To his credit, since taking office in 2015 President Magufuli managed to improve Tanzania's score in the Transparency International Corruption Perception Index (CPI). By contrast, as seen in Table 1, Uganda's score deteriorated in the same time frame. Kenya's improved but only slightly.

Table 1 – Corruption Perception Index
(ranking over number of countries assessed)

	Tanzania	Uganda	Kenya
2017	103/180	151/180	143/180
2016	116/176	151/176	145/176
2015	117/168	139/168	139/168
2014	119/175	142/175	145/175

Source: Compiled by the Author with data from the Transparency International Corruption Perception Index (CPI). https://www.transparency.org/news/feature/corruption_perceptions_index_2017

Data on the oil industry is not readily available in Uganda and Kenya, apart from basic information on oil and gas blocks, production expectations, and ballpark investment amounts. The arrival of China as a key investor and lender to these two countries in recent years, may have contributed to intensifying the secretive style (Hickey & Izama, 2016). Chinese investors typically prefer making deals with foreign governments behind closed doors, and their record at releasing information is quite low (Vasquez, 2019 (forthcoming)). In recent years, the European Union, Great Britain, Germany, Ireland, Denmark and Norway roze loans to Uganda, and Japan, Canada and the African Development Bank did the same with Tanzania (prior to the arrival of President Magufuli) for alleged funds misallocations (Reuters, 2012) (DW, 2014).

In Kenya and Uganda, the oil industry will be instrumental to economic growth and could have a significant political impact as first production is expected in time for the next presidential elections scheduled for 2021 and 2022, respectively. By contrast, natural gas will probably not be among the main drivers of the economy and political changes in Tanzania in coming years, largely due to ongoing delays in developing the industry.

In Kenya, oil has the potential of flipping the balance of power ahead of the next presidential elections. Political power in Kenya is divided along ethnic lines and the Turkana ethnic group tends to vote against Kenyatta's Kikuyus. Oil is contributing to the rising influence of the Turkanas in national politics. Kenyatta recently named a former Turkana county governor as his Petroleum minister, hoping he will help mend disagreements on revenue allocation with the oil producing county. Clearly, failure by the central government to properly devolve oil revenues could seriously imperil the future of the oil industry (Vasquez, 2013). It will be interesting to see how far the oil industry will continue to escalate the political power of the Turkanas, and if it will influence the current ethnic balance of power in view of the 2022 presidential elections.

In Uganda, the septuagenarian President Museveni has been in power for more than three decades and is eligible for a sixth term in the 2021 presidential elections. Economic growth is projected at some 6% of GDP per year by 2022-2023, largely driven by new oil production (EIU, November, 2018). The imminent oil income will most likely allow Museveni to keep up his support base for the next elections, with assurances of continued payments for his expensive patronage machine once production begins. In the long run, how a post-Museveni government will manage the oil industry remains a big question mark. This is particularly true in light of his micro management of the sector to get the best deals for Uganda and to personally guard against possible graft.

In the case of Tanzania, the government's strong stance towards private investors threatens to jeopardize the prospects of the costly infrastructure works that are needed to commercialize its offshore natural gas reserves. If business confidence dwindles as a result, the investments needed to build the LNG export plant may be delayed and with it, the potential for economic growth and job creation.

The Role of Oil and Gas in Shaping Regional Political Dynamics

Regional cooperation among East African countries has never been straightforward. Since oil and gas were discovered in the region, talk about regional infrastructure integration exposed historical rivalries and shaped new differences between regional neighbors. In particular, the lengthy pipeline saga about Uganda's choice between Tanzania or Kenya to export its landlocked oil laid bare each country's political and economic strengths and fears, and also the power of corporations to tilt the regional balance one way or the other.

Uganda and Kenya had originally signed a memorandum of understanding for building an oil pipeline that would take their landlocked reserves across Kenya's Northern region to the Indian Ocean. The pipeline would serve as a jumping board for Kenya´s President Kenyatta's flagship LAPSSET corridor project. LAPSETT was designed to spearhead economic development in Kenya's least developed Northern regions through new infrastructure across borders, but also through the creation of downward linkages with the local economy.

Kampala's choice of Tanzania and not Kenya frustrated President Kenyatta's grandiose plans to have his country at the center of East Africa's development through LAPSSET. More than that, it uplifted Tanzania and not Kenya as the economic locomotive of East Africa. It did so at a time when Dar es Salaam and Nairobi were tangled in a dispute for regional dominance in 2017, that ended up in mutual trade sanctions. The trade dispute was eventually solved, and Tanzania came out ahead in its attempt for regional dominance. In reality, what ultimately tilted the balance towards a pipeline route across Tanzania, and not Kenya, was an intense behind-the-scenes lobbying campaign by Total, and in particular, the company's offer to finance the Hoima-Tanga route[9]. Total expressed security concerns about building a pipeline through Kenya's conflict-prone Northern region, close to the porous Somali border.

Kenya will now build its own pipeline to get Turkana landlocked reserves to the yet-to-be-built port of Lamu. As mentioned before, Kenya's domestic output will likely not be enough for the infrastructure to be commercially viable. Nairobi could find a way out of the problem by convincing South Sudan to export its large landlocked crude through the port of Lamu and create economies of

9. Author discussions with company representatives in Nairobi.

scale with Kenya's oil. If this were to happen, East Africa would be divided in two strong oil-led economic blocks: one governed by Uganda and Tanzania and the other, by Kenya and South Sudan.

Such divisions around oil could further delay the so far elusive regional partnership under the East African Community (EAC), which was created almost 20 years ago to foster economic cooperation among member countries. Fear of relinquishing sovereignty and persistent import-export restrictions between member states have been the main obstacles to a successful EAC. If well managed, oil could be the catalyst of regional economic development and East Africa cooperation. Regional collaboration could for example, contribute to reduced transportation costs for landlocked oil reserves while creating economies of scale. On the contrary, a weak oil sector could further exacerbate geopolitical competition and bring East African countries further apart.

Conclusion

The oil curse is one of the oldest theories on how in certain circumstances, oil wealth can negatively impact countries' development possibilities. The level of hydrocarbons discovered in East Africa is relatively low and will likely not generate strong economic dependency on oil and gas revenues, as is the case in larger oil producing countries like Nigeria and Angola. In those countries, huge oil income is a strong disincentive against economic diversification and a balanced regional development. But if not managed carefully, the development of the oil and gas industries in East Africa could not only negatively impact domestic and regional economies, but also the political landscape. The relative authoritarian tendencies evidenced by the government management of the hydrocarbons industry in Tanzania and Uganda might be reinforced, and geopolitical rivalry could increase. If the massive increase in infrastructure needed to support the development of oil and gas in Kenya, Uganda, and Tanzania is not carefully planned and managed it could contribute to increasing already considerable public debt levels, and negatively affect already constrained budgets. How these situations will evolve is too soon to tell, but risks are certainly there.

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