Will Tanzania's Natural Gas Endowment Generate Sustainable Development?

Ross Harvey

1 Introduction

Tanzania first discovered natural gas in commercially viable quantities in 2010, roughly 100 km off its coast. In March 2016 another major discovery of 2.7 trillion cubic feet was made in the Ruvu Basin, estimated at a value of some USD 8 billion (Burgess 2016). This brings Tanzania's total estimated natural gas reserves to roughly 60 tcf, which could generate up to USD 5 billion in annual revenues (Olingo 2017). Production of natural gas for domestic consumption began in 2004, but the deposits discovered up to that point were small and did not attract much foreign interest or investment. While the new discoveries and the associated foreign direct investment in infrastructure could trigger further surges in an already fast-growing economy, caution is warranted—not only because the envisaged exploration and processing of natural resources faces a number of economic obstacles. Windfall resource rents invariably generate incentives for elites to curtail political freedoms and abrogate their governance responsibilities (Bates 2008; Harvey 2014a, b; Robinson et al. 2006; Ross 2015).

One of the major determining factors of whether natural gas rents will help or hinder Tanzania's development is the strength of its economic and political institutions (Mehlum et al. 2006). In July 2015, three new oil and gas bills were passed by the legislature. A recent lower oil price has probably been a blessing in disguise for the country—exploration investment has slowed, ostensibly allowing more time to strengthen institutions and develop appropriate legislation; less reputable players

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have had to withdraw from the natural gas fields meanwhile.[1] If it is the case that strong institutions are a prerequisite for positive development outcomes, then the rules governing natural gas extraction and processing should be credibly designed before large-scale production begins. Credibility means that they will be implementable in the context of political realities. To use the language employed by Levy (2014) and, among others, Acemoglu and Robinson (2013) as well as North et al. (2012), policy design should be incentive-compatible with the distribution of political power. Mere de jure rules are insufficient for ensuring appropriate governance of the sector, but they are still necessary. As my analysis further below suggests, Tanzania is relatively well placed to harness its natural gas bonanza to effect positive development outcomes—although recent political economy developments suggest that such progress could be uneven.

This chapter examines the development prospects potentially afforded to Tanzania by its significant natural gas endowment. The first section details the natural gas discoveries in terms of magnitude and potential value, and locates this within Tanzania's existing economic reality. The second section briefly reviews the salient literature on the relationship between resource abundance and underdevelopment. It also introduces a game theory model that helps to visualise the set of incentives facing ruling elites in resource-abundant, institutionally weak states. The third section assesses the strength of Tanzania's governance institutions and the impact that recent political economy developments may have on the sector. It suggests how oil rents might affect the existing political equilibrium. In the fourth section, sector-specific institutions that matter for governing the natural gas industry and its rents are discussed. The closing section suggests certain practical policy steps that can be taken to strengthen these institutions.

2 Magnitude and Potential Value of Tanzania's Natural Gas

Despite extensive estimated onshore and offshore deposits of 60 tcf, Tanzania's proven natural gas reserves are substantially smaller. Nonetheless, discoveries in the last 3 years have been prolific. The first was made in 1974 during exploratory drilling off Songo Songo Island in Lindi Region. Subsequent discoveries followed shortly thereafter at Mnazi Bay in Mtwara Region. Major exploration only began in the early 2000s (Lokina and Leiman 2014). In 2010, upon discovery of commercially viable quantities, production began. Tanzania produced 19 billion cubic feet of natural gas in 2014, roughly 30% less than in 2010. All natural gas is consumed locally. A 532-km pipeline was commissioned in 2015, and will run from the Mnazi Bay concession in the Rovuma Basin in south-east Tanzania to Dar es Salaam, the

[1] Personal interview with a marine ecologist and consultant, Dar es Salaam, 12 April 2016.

country's major port city. The pipeline has a capacity of 0.8 billion bcf a day, and was financed by a USD 1.2 billion loan from China (Ng'wanakilala 2016).

The country has yet to export its natural gas. The Energy Information Administration (2016) estimates that Tanzania has the potential to become a net exporter of liquefied natural gas (LNG). In April 2014, the international companies involved in offshore exploration agreed to build an LNG plant in partnership with the Tanzania Petroleum Development Corporation (TPDC), which is the country's national oil company (Bungane 2015). The TPDC finalised a deal in 2016 to acquire the title deed for the land on which the plant is to be built in the southern coastal city of Lindi. The project is in the pre-front end engineering design (FEED) stage, and should enter the full FEED one in 2018. The export terminal is valued at an estimated USD 30 billion (Energy Information Administration 2016). Yet Statoil, one of the international partners, warned in November 2016 that the project could be pushed back to 2026. A briefing by the Economist Intelligence Unit (2015) stated that significant production before the end of the decade is unlikely, highlighting competitiveness concerns in an oversupplied market and the difficulties of raising capital for complex LNG deals, poor infrastructure and regulatory inefficiencies.

Despite these difficulties, the pipeline and LNG processing plants could generate long-term export revenues of an estimated annual USD 5 billion by 2025; it would also have the latent benefits of reduced demand for energy imports, local tax revenue-generation and potential job creation (Hayman 2016). In a country with one of the lowest rates of access to electricity in the world, LNG could produce broad-based gains. Electricity access reduces indoor air pollution by providing safe light and heat sources, helps pupils to complete homework and allows for the refrigeration of fresh food. Tanzania only has 1500 megawatts of installed electricity generation capacity, of which more than one-third comes from hydroelectric sources. The recent drought has rendered these facilities unable to operate at full capacity. The other major challenge is that the state-run power utility, the Tanzania Electricity Supply Company (TANESCO), is a cash-strapped monopoly. While generation from independent power producers could satisfy Tanzania's local energy demand, TANESCO often fails to pay its bills on time. This, in turn, creates cash flow problems for private electricity providers such as SonGas, which supplies about 20% of Tanzania's electricity; it recently threatened to stop production unless it is paid (Hayman 2016).

Aside from regulatory considerations, the primary determining factors of whether an LNG plant will be built are the market fundamentals of price, the size of likely future demand and the marginal costs of extraction. Compared to other fossil fuels, natural gas is cleaner to extract and transport. It is less environmentally damaging to burn in fuel form. One reputable paper concludes that West Texas Intermediate (WTI) crude oil and Henry Hub prices (as proxies for oil and LNG prices, respectively) remain linked in their long-term movements. The authors argue that 'a [USD] 70 per barrel WTI average price (expressed in real 2000 prices) is likely to promote a long-run equilibrium natural gas price at the Henry Hub of around [USD] 9.40 per [million British thermal units]' (Hartley et al. 2006: 8–9). For Tanzania, this means that the plant is likely to prove financially viable if it does go ahead. Of course, this

assessment does not consider the risk of stranded assets in the context of global divestment campaigns to remove capital from fossil fuels—as analysed in Chap. 9 of this volume. Moreover, it does not consider the possibility that natural gas production may crowd out incentives to invest in renewable energy.

Natural gas may prove useful to Tanzania, but it should not be viewed as a panacea for the country's development. Tanzania requires structural economic transformation too. If this is to be achieved, it will require concerted political effort—so as to ensure that natural gas is used as an instrument of development rather than a source of rent to maintain political power by distributing patronage at the expense of diversifying the productive economy. There is also considerable risk in sinking capital into infrastructure projects such as LNG plants. Governments tend to favour large projects that are politically sellable and generate rents for the elite. This may crowd out opportunities for smaller ones that are more flexible and geographically devolved. For instance where there are budgetary trade-offs that have to be made, solar photovoltaic plants may be a wiser investment in terms of an overall development strategy. As costs decline rapidly, these plants would increase Tanzanians' access to electricity—which is another major obstacle to sustained economic growth at present. Of course, this does not preclude the option of using natural gas, where viable, as a supplementary measure in a more diversified domestic energy basket.

What is more, if Tanzania is to optimise its natural-resource endowment for long-run sustainable and inclusive development, the country's institutions will have to be insulated against political interference. As the model presented in the next section indicates, windfall resource rents tend to create incentives for elites to reduce taxation (to appease the citizenry, severing an important accountability link in the process) and to siphon funds away from the fiscus for self-enrichment. This rent acquisition can also strengthen the position of the ruling coalition by extending the size of the patron–client network and, thus, reducing the efficacy of political opposition.

3 Petroleum, Politics and Perverse Incentives in Weak Democracies

A vast literature now exists that assesses whether natural-resource endowment does indeed constitute a development curse (Andersen and Ross 2013; Auty 2001; Haber and Menaldo 2011; Hammond 2011; Jensen and Wantchekon 2004; Karl 1997, 2004; Mehlum et al. 2006; Ross 2001, 2006, 2012, 2015; Sachs and Warner 1995; Van der Ploeg 2011; Wright et al. 2013). The author of the famous book *Paradox of Plenty*, Terry Lynn Karl, noted in 1999 that 25 years after the oil price boom of the 1970s, most oil-exporting countries were in crisis. This was especially the case for capital-deficient ones 'plagued by bottlenecks and breakdowns in production, capital flight, drastic declines in efficiency, double-digit inflation, overvalued currencies and

budget deficits' (1999: 32), which undermined export competitiveness in the manufacturing sector. The high hopes of development that had infused the formation of the Organisation for Petroleum Exporting Countries in the 1960s were dashed. Political stability suffered as a result. By 2013, Diamond and Mosbacher noted that not a single African country had been able to keep oil money from being captured by small elites: 'Every one of the 12 current oil exporters currently fall into the bottom half of the UN's Human Development Index (HDI). According to the World Bank, more than a tenth of all children born in oil-rich African countries die before the age of five, double the global average' (2013: 94).

Given the importance of political institutions for determining a nation's development prospects, the most compelling explanations for these adverse outcomes are those that focus on how oil wealth affects political dynamics. Ross concludes that:

> There is considerable evidence to support three broad claims about the conditional effects of natural resource wealth: that higher levels of petroleum income lead to more durable authoritarian rulers and regimes; that more petroleum increases the likelihood of certain types of government corruption; and that moderately high levels of petroleum wealth, and possibly other types of resource wealth, tend to trigger or sustain conflict when they are found in regions dominated by marginalised ethnic groups, particularly in low- and middle-income countries. (2015: 252)

To aid the assessment of Tanzania's prospects, consider the following generic game developed by Bates (2008): there are two citizen groups and one specialist in violence (usually the government or some ruling coalition). The government does not possess a monopoly over violence in the Weberian sense and the citizen groups have access to arms, should they choose to revolt.[2] The equilibria of the game suggest conditions under which order will prevail, which is the desired effect. Each citizen group possesses a given amount of resources that can, within the parameter of time management, be allocated between leisure, preparing for military action or work. Time resources allocated to work are productive, the opposite being true for military preparation. Citizens derive utility from income and leisure. The ruling coalition can increase its wealth through predation or tax collection.[3] These dynamics represent a military balance between the government and its citizens. The government will only choose to raid the citizens if its expected revenue from doing so is larger than the cost (both financially and to its legitimacy). Conditions under which equilibrium is achieved lay the foundation for political stability and the maintenance of the elite bargain. The government, ideally, provides protection and refrains from predation. Citizens refrain from military endeavours and choose a combination of leisure and work instead. The government must tax the population enough to avoid the incentive to extract rents elsewhere, but also not excessively. If taxes are too high, work becomes dis-incentivised—which may incite rebellion.

[2]Tanzania is a relatively peaceful country, and so the risk of instability is perhaps overplayed in the stylised model. Nonetheless, oil rents have had pernicious effects on stability in other countries. Hence, the model serves as a means of understanding the risks of future instability in Tanzania.

[3]Tanzania's tax base is very narrow, making the government's options in this respect quite limited.

The dynamics of the game change when an exogenous windfall enters the equation, as resource wealth plays a significant role in shaping the behaviour of elites. Bates notes that ‘in the face of dwindling public resources or insecure political futures, given the availability of wealth from appropriable resources, they could greet with equanimity a future of political disorder’ (2008: 28). The government now has a diminished incentive to tax citizens, but the citizen groups may have an increased one to take up arms against the government or to raid other citizens if they appear to be favoured by the regime. It is not an unusual strategy for governments to extend patronage to one citizen group to buffer against potential revolt by other ones. Windfall natural gas rents in Tanzania may cause a deviation from the strategies that, until now, have ensured that equilibrium conditions are met.

Two examples suffice to demonstrate the value of the model. Angola and Nigeria are the leading oil producers in sub-Saharan Africa. In both countries, oil was discovered in the late 1950s and this commodity has been associated with strong manifestations of the resource curse. Both are afflicted by corruption, a lack of economic diversity (the so-called Dutch disease), authoritarian rule (though punctuated occasionally by attempts at civilian and democratic rule in Nigeria), internal strife (a 27-year long civil war in Angola and a 3-year long one in Nigeria) as well as poor performance on the HDI. In both cases, oil-rent windfalls generated an incentive for the ruling elite to pursue pay-offs off the equilibrium path. In Angola, Jose Eduardo dos Santos maintained an iron grip over oil rents for personal kleptocratic consumption from 1979 to 2017. While he and his ruling coalition amassed wealth for themselves, the population suffered; Angola still has one of the highest child mortality rates in the world (Soares de Oliveira 2015). In Nigeria, no single ruler or ruling coalition could gain that level of control. However, access to oil rents were the spoils of political office for which numerous actors contended. This has exacerbated corruption and ethnic tensions (Bourne 2015).

If Tanzania’s ruling party fails to govern the impending natural gas rents in a way that enhances the country’s welfare, or at least gives the appearance of doing that, then the risk to stability is only going to be heightened. The ruling party and its patronage network gain short-term pay-offs high above the equilibrium (tax) line, but could place the longer-term stability of the country at risk for the reasons mentioned above. The next section briefly explores the potential threats facing Tanzania in terms of the model outlined above.

4 Can Tanzania Withstand Predation Temptation?

President John Magufuli came to power on an anti-corruption ticket in 2015. He has given every appearance of credibly delivering on that promised commitment. However, the concern is that giving the appearance of intolerance towards petty corruption is distinct from rooting out grand corruption. The corollary to this is that corruption has been deeply embedded in Tanzanian politics for a long time now. The danger is that it may have become so normalised that attempts to uproot it may

destabilise the ruling coalition. Gray (2015) shows that while incremental progress has been made in improving public financial management since the late 1990s, this has not translated into reducing the intractability of grand corruption. Grand corruption, in contrast to petty corruption, is a term used to define financial malfeasance among the top echelon of political elites—rent acquisition that falls well outside the parameters of the rule of law, and affects a country's institutional fabric at the highest levels. Gray further contends that, in Tanzania, formal or de jure institutions do not neatly align with the distribution of political power between contending social groups. In other words, the de facto rules of the game may be different to those of formal institutions—such as constitutions or laws governing natural-resource extraction.

If natural resources are to contribute to development, rather than undermine it, then it is essential that they be well governed. This does not mean, however, that a country should merely have good laws and policies on paper. It rather denotes that the institutions responsible for implementing those laws and policies must be both capable of governing and credibly committed to honouring the relevant contracts (Greif and Kingston 2011; North et al. 2009). The laws will mean little if the logic of the elite bargain is not underpinned by a strong core belief in the rule of law, first among the elite and then among the polity. Too many development interventions simply call for better governance mechanisms to be designed, without first understanding what impact such laws and policies might have on the political equilibrium (Acemoglu and Robinson 2013; Bates 2008; North et al. 2012). Formal rules can simply create a smokescreen behind which rent extraction occurs. Policy recommendations are, therefore, unlikely to gain traction unless the nature of the current political settlement in Tanzania is first understood. Similarly, the pattern of international donors withholding aid and then granting it again once sufficient penance has been demonstrated is unlikely to deal with the underlying problem here. As it stands, there is a strong risk of predatory off-path equilibrium behaviour. As shown below, President Magufuli's authoritarian proclivities are likely to be strengthened through access to natural gas rents.

According to the Bates model, there are three primary conditions under which political order—and, therefore, the foundations for inclusive growth—can be achieved. First is the level of tax revenue. If rates are too low, predation may be tempting despite the foreseeable costs. There is a risk in Tanzania that the level of tax revenue accruing to the ruling coalition may be too low to mitigate the temptation of natural gas rent predation. A sufficient flow of tax revenues is one of the key variables to mitigate against corruption that might otherwise occur through the siphoning of rents for distribution across existing patronage networks. As a recent Chatham House Report indicates, 'in addition to the need to increase taxation overall is the need to diversify revenue collection from the current focus on large, often foreign, enterprises based in Dar es Salaam. These enterprises provide 88% of tax revenue, despite generating only 17% of GDP' (Anyimadu 2016: 19). The Magufuli government intends to increase domestic tax revenue collection. They are targeting inefficiencies in current collection efforts, and trying to root out corruption by customs officials. If tax revenues are to grow and the sources thereof to be

diversified, the trust relationship between the government and the private sector will have to improve rapidly.

The second condition for order is that the magnitude of rewards from predation should not be too large in relation to other sources of revenue (particularly taxation), as this may suggest to the ruling coalition that future instability is worth incurring against the immediate utility of large natural gas rents. The estimated ratio of natural gas to tax revenue for Tanzania is 1.3 to 1.[4] This is much lower than the ratio in places like Angola, Gabon and Liberia, where it is estimated to be upwards of 4 to 1 (Diamond and Mosbacher 2013). A new lower long-run equilibrium oil price of only USD 50 a barrel augurs well, although the volatility of prices can be as detrimental to long-run political stability as high rents are. Resource-rich countries can suddenly become cash-starved when high prices crash. Moreover, in the context of one-party dominance (as it is the case in Tanzania), oil and gas wealth tends to entrench the power of the incumbent (Robinson et al. 2006). In the absence of meaningful institutions of transparency and accountability, resource revenues can be diverted to political insiders—allowing them to further consolidate their positions of power. Tanzania is, therefore, at real risk of natural gas rents providing an avenue for elite predation. However the rents-to-taxation ratio suggests that the problem is not as daunting as in other places, especially in the context of lower prices.

Third, the ruling elite must be relatively patient and not discount the future too heavily. This is a mildly paradoxical condition in that parties like Tanzania's Chama Cha Mapinduzi (Party of the Revolution, CCM) can afford to make policy decisions with a longer time horizon than their contemporaries in more competitive democracies such as Ghana, where power alternates regularly. However, the resultant lack of demand for institutions of accountability (because citizens are unlikely to vote the CCM out of power) can also facilitate destabilising rent acquisition. The CCM can afford, in electoral terms, to take a long-term political view. Internal power dynamics and the deeply embedded nature of grand corruption do, however, create a risk that the ruling elite may nevertheless not opt for the most appropriate governance tools. The biggest recent corruption scandals in Tanzania strongly suggest that the government protects those domestic business elites with close links to the CCM. Even factions of the CCM that have exposed cases of corruption and called for accountability have refrained from breaking away from the party altogether (Gray 2015).

According to the Bates model, the strength of civil society also matters a great deal. The extent to which the citizenry will hold the government accountable for how it manages resource rents is crucial. A discussion of appropriate governance mechanisms follows in the next section, but whether these are implementable and indeed even credible for attaining accountability and fostering inclusive growth depends on the willingness and ability of civil society to operate as a proficient watchdog itself. Applying the model to the Tanzanian case, the literature suggests that civil society is

[4]This ratio was calculated using tax revenues derived from comparisons of aggregate national tax revenues and projections of oil or natural gas revenues, with the latter being based on estimated reserves, projected exports and estimated future oil and gas prices.

relatively weak, largely for historical reasons. The creation of a socialist system throughout the 1960s and 1970s consolidated power within the formal institutions of the ruling party, by suppressing other potentially powerful groups. As a result, power has never been organised along class, ethnic or regional lines. The benefit is that Tanzania has been remarkably peaceful compared to its neighbours, in particular Kenya and Uganda. The cost, however, is that even after the 1995 move to multiparty elections, the scope for political mobilisation is still limited (Gray 2015). Tanzania's civil society therefore seems unlikely to challenge the power of the state. Many citizens are dependent, through patronage networks, on the largesse of state officials for their welfare. Elsewhere, I conclude that: 'While unlikely to resort to military activity, [citizens] are also unlikely to engage in productive activity if sufficient income can be derived through patronage, especially in a context of relatively limited economic opportunity for an expanding workforce' (2014a: 19).

According to the Bates model, citizens are unlikely to engage in revolt unless the government is perceived to favour one group over another in the distribution of rents. Supporting this prediction to some extent, there was localised but severe conflict in Lindi and Mtwara during the presidential campaign of 2013. Unmet expectations of wealth from the natural gas discoveries fanned into demonstrable opposition to extractive projects when the government announced that natural gas would be piped directly to Dar es Salaam instead. Residents protested violently against the construction of this pipeline. More than 12 people died, and the police were alleged to have participated in the looting of citizens' property (Ndimbwa 2014). This suggests that the risk of revolt in an otherwise peaceful society may operate as a significant constraint on the actions of the state in terms of how it chooses to distribute the benefits of resource wealth. Overall, however, civil society could be stronger—and indeed will need to be bolstered in advance of natural gas revenues becoming a major factor in the country's political economy.

5 Natural Gas Governance Institutions

Beyond the generic governance concerns discussed above, the specific negotiating capacity within the Tanzanian government has been questioned too. Institutions of accountability are important governance mechanisms—a necessary condition for mitigating against a potential slide into instability, as characterises other petro-states—but they are insufficient for ensuring that optimal deals are struck that furthermore use natural gas as a lever for economic diversification and inclusive growth. To ensure this, contract negotiating capacity should be developed—along with state capacity more generally. Only then will laws and policies become practicable and beneficial for development.

A 2014 article in the *Economist* highlighted potential negotiating-capacity problems. In May of that year, part of a contract between ExxonMobil, Statoil and the TPDC was leaked online. The production sharing agreements (PSAs) that are negotiated between the TPDC and oil majors are confidential, although the government

does have model guidelines for constructing PSAs—which the International Monetary Fund uses to make profit and revenue forecasts. The online leak of the contract with ExxonMobil and Statoil revealed that it differed significantly from the model: 'Tanzania would receive 30–50% of the "profit gas" (after costs are covered and royalties paid) rather than the 50–75% specified in the model agreements', the *Economist* summarised. Opposition critics calculated that this difference in terms could lead to a USD 12 billion revenue shortfall (of what could have been gained). The TPDC disputed the figure, and argued that the country would obtain 61% of the profits once corporate taxes are included plus 5% royalties. Statoil similarly projected that 65–85% of the profit would accrue to Tanzania. In defending the contract, the TPDC attributed the discrepancy between the model and the actual contract to the high costs of deep-sea exploration and the absence of infrastructure, pricing mechanisms and the lack of an existing market for the country's natural gas (as the *Economist* reported).

Whether or not the discrepancy is warranted, the IMF's call for public disclosure of the terms of the PSAs seems reasonable. While the government has apparently committed to publishing all new contracts, this will not apply retroactively and agreements are already in place for most of the known deposits. To list on the Dar es Salaam Stock Exchange, as the government has required all firms to do since 2017, contract terms must be made public. Moreover, as a recent working paper makes clear, the passing of the Tanzania Extractive Industries Bill in 2015 'marks another step change in transparency' (Pedersen and Bofin 2015: 24). The authors conclude that the government's bargaining position has improved over the last decade, and concede that full transparency may not be feasible given competing investments in neighbouring countries such as Kenya and Uganda. However the process of regulation formation, at least prior to 2015, has not exuded stability and may have undermined investor confidence. The recent mineral-export ban, imposed through executive fiat, is one example of what investors fear. For accountability's sake, the authors of the just-mentioned working paper call for more robust involvement from the legislature to monitor deals and check the terms of contracts that cannot be disclosed to the public.

The de jure institutions governing the natural gas sector in Tanzania are as follows: The Extractive Industries Act; the Oil and Gas Revenue Management Fund Act; the Petroleum Act; and the Tanzania Extractive Industries Transparency and Accountability (TEIT) Act. These interact with (and are, in some respects, products of) international institutions such as the Extractive Industries Transparency Initiative (EITI) and the Natural Resources Charter, both designed to mitigate the resource curse (Melyoki 2017). Tanzania was suspended from the EITI only a month after passing the TEIT Act in August 2015. It had failed to submit its 2012/2013 report in time (by June 2015), and was denied its application for an extension. The EITI is a voluntary set of principles that countries comply with to maintain their listing. Its resource governance value-addition is to promote the transparency of extractive-industry revenue flows from companies to governments. It does not, however, require expenditure transparency from recipient governments. By December 2015 the

suspension had been lifted, as Tanzania submitted its report before the end of that month (the required stipulation to avoid being delisted to non-compliant status).

One of the simultaneous strengths and weaknesses of the EITI is that it is a voluntary mechanism. This invites disclosure, rather than compelling it. Countries can then choose to disclose as a function of endogenous motivation rather than external imposition. One of the ways in which to institutionalise EITI principles is to integrate them into domestic legislation—which Tanzania, to its credit, has done. The TEITI Act, for instance, demands that all new mineral and natural gas concessions, contracts and licences are made available for public scrutiny. A roadmap to ensure disclosure of beneficial ownership has also been crafted. Beneficial-ownership disclosure requirements are a crucial variable in the battle against illicit financial flows into nameless shell companies, normally in tax havens or offshore jurisdictions, and these are written in. The latest Tanzania EITI report, which is from 2015, identifies the adoption of the TEITI Act as a strength, along with the other pieces of legislation mentioned above, as indications of transparency principles being mainstreamed into mineral and natural gas administration.

The Petroleum Act regulates up-, mid- and downstream activities and establishes a Petroleum Upstream Regulatory Authority 'to provide for the National Oil Company, to secure the accountability of petroleum entities and to provide for other related matters' (United Republic of Tanzania 2015: 14). The act separates out the functions of commerce, policy and regulation. This is a welcome departure from the previous regime, which shared the responsibilities between the Ministry of Energy and Minerals and the TPDC and allowed excessive ministerial discretion (Melyoki 2017). The TEITI Act, in turn, is a departure from the Petroleum Exploration and Production Act of 1980, which allowed limited information disclosure. Inspired by the EITI, the new act repeals permissions for non-disclosure. The Oil and Gas Revenue Management Act provides the framework for fiscal rules pertaining to the management of oil and gas revenues. It also provides for the establishment of an oil and gas fund, a sovereign wealth one in the mould of Norway's example.

Local-content provisions are one of the primary triggers that the legislation emphasises for domestic development. The Petroleum Act stipulates that the TPDC shall have exclusive rights over the natural gas midstream and downstream value chain in order to 'promote local content including participation of Tanzanians' (United Republic of Tanzania 2015: 26). The overall development idea of local-content regulations is to develop local businesses into becoming internationally competitive in terms of meeting supply requirement standards for international oil and gas companies. Technology transfer to Tanzanians from international experts is crucial for developing local talent, and this is envisaged as occurring through the development of local training institutions. Experience from the mining sector suggests that local suppliers face significant barriers to entry into the supply chains for multinationals. To date, the Tanzanian government has not provided the business support required to help firms develop to the appropriate level. One study records that 'so far, there have been no efforts made by the government to support such business ventures, and mining companies' efforts to assist local suppliers to produce goods are seen by many as little more than lip service and publicity stunts' (Lange

and Kinyondo 2016: 1100). Melyoki suggests, meanwhile, that in light of this and of the burdens placed on the TPDC for a host of other functions, 'it is advisable to assign the local content development responsibility to a different agency as well as allocate resources for execution of that role' (2017: 189).

6 Conclusion

Tanzania has sizeable natural gas resources. The proportion of that which is recoverable or economically viable to extract is yet to be fully established. The initial forecasts for revenue are likely overstated, given a declining oil price. Nonetheless the world has not yet shown signs of ending its addiction to fossil fuels, despite strong climate change indicatives that make such a move imperative. There is, therefore, an opportunity for Tanzania to earn significant natural gas rents. This chapter has examined the potential for the country to harness its natural gas endowment as a lever for inclusive growth. As noted, a consensus has emerged in the resource-curse literature that institutions are the most important variable for determining whether natural resources will contribute to or contrariwise undermine development. Following Bates (2008), this is because the way in which resource rents are acquired and distributed affects current and future political equilibria. If these remain stable, resource rents can be employed to build a diversified economy. If resource rents become a site of predation for the ruling coalition of political and business elites meanwhile, distortions to the equilibria may result in future instability and economic stagnation.

The game theory model applied in this chapter revealed that there are significant challenges in broadening Tanzania's tax base and increasing its accompanying revenue collection. As long as natural gas rents have the potential to dwarf tax revenue, or undermine the incentive to even collect taxes, the already tenuous citizen–state accountability link may be weakened further. While oil and gas prices remain low and production on the planned LNG plant has stalled, every effort should be made to strengthen civil society with oversight and accountability skills. Patronage distribution can undermine such endeavours. Natural gas rents pose a significant risk in this respect, in that they help elites to expand client networks and undermine civil society efforts at holding the government to account. Tanzania's new legislation to govern the gas sector looks promising, despite its rocky path to final adoption. It exemplifies the ideals of participative governance, appropriate separations of functions to avoid conflicts of interest and of limited ministerial discretion. Whether or not the new legislation will actually allow for the creation of inclusive socio-economic benefit remains to be seen, however. Of concern is that stipulations for contracts to be made publicly available are not retroactively applicable, and many of the concessions have already been allocated and contracts finalised. Retrospective application would likely undermine investor confidence and threaten a reversal of current terms which Tanzania cannot afford, especially as it is competing with Kenya and Uganda for investment in the sector.

Whether Tanzania's natural gas endowment proves to be a blessing or a curse will depend on the nature of the elite bargain eventually concluded. If the accountability-inclined faction of the CCM can gain sufficient influence in the cabinet and in parliament to ensure that de jure institutions become embedded, Tanzania will indeed benefit from its natural gas resources. The implementation of new laws may serve the country well. However if these institutions are treated as irrelevant by those with de facto power and predation gains the upper hand, the stability of the country's social contract will be threatened—which is, of course, suboptimal for generating sustained inclusive growth. Civil society will have to improve its overall efficacy, including the construction of a stronger opposition movement to CCM's one-party rule.

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