

Blessings upon Blessings: Making Natural Gas Discovery and Extraction of Equitable and Sustainable Benefits to Tanzania

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Abstract. Tanzania is a developing economy but rich in natural resources not yet fully exploited to contribute to economic growth and development. Of recent, vast quantities of natural gas potential for commercial extraction have been discovered and further exploration activities are ongoing to establish the actual natural gas potential of Tanzania. Official figures indicate that Tanzania's confirmed natural gas reserves stand at over 43.1 trillion cubic feet (TCF). The discovery has generated great optimism, especially in the government cycles, that Tanzania will soon be an exporter of energy generated from natural gas and fulfils its Vision 2025 of becoming a middle income country by 2025. This paper problematises the optimism and euphoria that comes with the discovery of natural gas in Tanzania. It argues that, although the discovery of natural gas has the potential of making Tanzania achieve its resource based development strategy, it is obvious that equitable and sustainable benefits will largely depend on how the sub-sector becomes inclusive of the needs, aspirations and expectations of the majority. The argument is therefore not what the government authorities think is best to do with natural gas but what the public expects from the extraction of natural gas. Thus the involvement of people in the design and implementation of all plans and strategies for natural gas extraction is crucial for the sub-sector's development.

I. Introduction

That Tanzania is a resource rich country is undisputable. It is the richest natural resource country in East Africa. It has vast natural resource endowments spanning from minerals to energy resources, biodiversity, water bodies, arable land and the like. For over two decades, natural resources have been at the heart of Tanzania's development and Foreign Direct Investment attraction efforts. In fact, recent impressive economic growth rates are accounted for, partly, by increasing inflows of FDI in the extractive industries. The economy has been

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growing at an impressive rate averaging over 6 per cent per annum since 2005 [1]. Paradoxically, this economic growth and natural resource extraction have failed to bring substantial changes to the poverty levels of Tanzania: the proportion of people living below the national poverty line has slightly declined from 38.6 percent in 1991/92 to 34 percent in 2008/09 [2]. This slight decline in poverty is mainly due to the fact that agriculture, the mainstay of rural population, has not significantly contributed to national economic growth and that growth in extractive sectors has not meant growth in agriculture [3].

While this is the case, vast quantities of natural gas have been discovered in Tanzania prompting great optimism especially in government circles. Confirmed discovered natural gas amount to 43.1 trillion cubic feet (TCF) (8 TCF onshore and 35.3 TCF offshore) [4]. This discovery is coming at the time when Tanzania is in a serious energy crisis characterised by intermittent power supply and one of the lowest per capita energy consumption in Africa [5]. Thus, it is not surprising that the government and other stakeholders see this as a golden opportunity for energising Tanzania's development. In the regions where natural gas has been discovered- Mtwara and Lindi for example, people are optimistic that this is their time to get rid of their marginalisation in development. They expect natural gas to be used for their regions' and individual development and would not want to see gas piped out of their regions to Dar es Salaam. However, what needs to be done to ensure natural gas discovery and exploitation is of benefit to Tanzania and its people remains elusive despite there being several plans and strategies for its exploitation. This paper contributes to the ongoing debate on how natural gas should be utilised to the benefit of all citizens in Tanzania. It does so by problematising the optimism that accompanies natural gas discoveries in Tanzania.

The paper draws on a rich literature and government plans and strategies for the sub-sector to argue that making natural gas exploitation of mutual, sustainable and equitable benefit to Tanzanians requires more than what the government thinks is right to do. It requires empowering the indigenous to speak for themselves and determine a development agenda they want from natural gas extraction. The remainder of the paper is organised as follows: section two explores and examines the optimism that comes with natural gas discovery in the light of several challenges facing Tanzania; section three highlights what the government wants to do with natural gas; and section four gives a way forward for what ought to be done to make natural gas extraction a blessing to all.

II. Natural Gas Discovery and Resulting Optimism

As noted above, the discovery of vast quantities of natural gas in Tanzania has been received with great optimism especially in the government circles. The government believes this is an opportunity for Tanzania to take off in terms of socio-economic and industrial development. The government is now speaking of a gas led economy. Presentations made by government officials during the first and second Tanzanian oil and gas conferences all indicate how the government is so optimistic about the resource. Comments made by the Minister of energy and minerals at the Second Tanzanian Oil and Gas Conference in October 2013 that Tanzania must take off with gas economy and soon be East Africa's major gas exporter also show the extent to which the discovery of natural gas has been positively received by the government.

This explains why the government is hastening the process of natural gas and oil exploration so as to determine the country's actual natural gas endowment.

Apart from the government, local citizens, especially those in areas where natural gas has been discovered, are also optimistic about this discovery. They see the discovery of natural gas as an opportunity for them and their regions to end decades of economic marginalisation. They expect to see natural gas extraction bringing tangible and extraordinary benefits to them and would not want to see natural gas piped away of Mtwara and Lindi without substantially benefitting them.

The optimism that follows natural gas discoveries is a product of numerous challenges that confront Tanzania which, it is thought, natural gas extraction would help resolve. Tanzania is very rich in natural resources and some of these resources have been extracted for some time now. What is appalling, however, is the fact that most of the people of Tanzania are poor: over third of the population live in abject poverty [2]; life expectancy at birth is 58.9 years and the country ranks 152nd in the recent human development report [6]. Given the fact that Tanzania struggles to alleviate poverty and become a middle income country by 2025, the discovery of natural gas seems to have come at the right time. It is therefore not surprising that it is accompanied by great optimism.

Further, intermittent power supply in Tanzania has cost the county billions of losses. Overreliance on hydropower has made the energy sector unreliable and less productive as climate change and variability continue to afflict developing countries. A report by the Confederation of Tanzania Industries (CTI) notes that unreliable power supply have cost manufacturers losses totalling 31 billion shillings per annum. These include income losses; machinery damage; loss of competitiveness in the market; demoralisation of investors; loss of jobs in the formal manufacturing sector; and frustrations of the prospects and plans for new investments [7]. The report further estimates losses to the government in terms of taxes at 9.5 billion shillings per year [7]. The consequences of these losses to the country's poverty eradication efforts and to the livelihoods of people are immeasurable. Access to modern energy services in Tanzania is also still limited: only 23% of the population in Tanzania have access to electricity (7% for rural areas) [8] and per capita energy consumption remains one of the lowest in Africa-less than 100kwh per annum. In the context of such challenges, it is not surprising that the government is too optimistic about natural gas discoveries. Such challenges and optimism also inform strategies and plans for natural gas utilisation.

III. What the Government Wants to do with Natural Gas

Compared to other fossil fuels, natural gas is more beneficial as it is significant in many sectors of the economy such as transportation, power production, industry and residential use [9]. In view of this, this section explores government strategies for natural gas utilisation. The government of Tanzania clearly wants to achieve a lot from the extraction and use of natural gas. The underlying goal is, as the minister for energy and minerals puts it, to make natural gas of benefit to all Tanzanians [10]. The Natural Gas Policy extends this further as it states

that 'natural gas resource should also contribute to improving the quality of life in Tanzania for many decades to come' [11]. The ongoing plans and developments testify to this.

In the first place, the government seems to build hopes on natural gas as one way of resolving intermittent power generation and supply that has crippled the country's economy for quite a long time now. The government recognises natural gas as one of the alternative sources of energy and is eager to develop its processing for power production. In the 2012/2013 financial year, for example, the government set aside 18 billion shillings for 390 MW Natural Gas Fired Plants in Kinyerezi in Dar Es Salaam and 20 billion shillings for the distribution of Natural Gas to different locations in Dar Es Salaam for power generation, industrial as well as domestic uses [12]. The 2013/14 ministry of energy and minerals' (MEM) budget speech notes that the government continues to implement the Kinyerezi I project for the production of 150 megawatts of power from natural gas [8]. So far, gas contributes 416MW into the national grid, accounting for about 35 per cent of power generated and pumped into the national grid, thus saving billions of shillings that would have been used to purchase diesel and jet oil to generate electricity [13]. Similarly, there are 35 industries in Dar Es Salaam that use natural gas as source of energy in their production [13]. With the use of natural gas for power generation, the country hopes to lift its electricity production from the current 97kWh to 236kWh per capita [14].

The second area where the government wants to use natural gas for the country's development is industry. The government is dedicated to capitalize on natural gas to promote the establishment of industries in Tanzania for the development of the agricultural and industrial sectors. According to the 2013/2014 MEM budget speech the government has already signed an agreement with Dangote Companies (Tanzania) Ltd for establishing a cement industry in Mtwara that will be powered by natural gas [8]. As for a fertilizer factory, efforts are underway to attract potential investors to invest in building a chemical industry that could produce ammonia urea fertilizer and its chemical by-products [15]. Significantly, over fifty factories are expected to be established in Mtwara and Lindi regions so as, as the Prime Minister argues, 'to transform the livelihoods of the locals in the southern regions and Mtwara in particular' [16]. Such factories are expected to include a fertiliser factory, seven cashew nut processing firms, two building equipment, two water plants, three cement industries, one plastic industry, one industry for manufacturing of blade, two oil producing industries, one plant for manufacturing fishing boats, fourteen tourism industries and eight transport equipment production industries [16].

Moreover, the government wants to use the discovered natural gas for various domestic uses. To improve the lives of many Tanzanians, the government plans to utilize natural gas for various domestic activities such as cooking and heating, among others. This is taken as a strategy to promote poverty reduction and protect the environment by significantly reducing the use of charcoal and fuel wood in households. The natural gas policy clearly articulates how relevant and vital it is to use natural gas domestically for a broad based development:

... the Government considers facilitating wide domestic utilization of this indigenous resource as an important element of the country's strategies for achieving rapid broad

based growth and socio-economic transformation. Such facilitation includes promoting production of natural gas based Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG), Gas to Liquid (GTL) and Natural Gas Liquids (NGL) for the domestic market...[11].

Also significant is the use of natural gas for an export market. The country envisages becoming a leading natural gas exporter in East Africa. The natural gas policy states that the export of natural gas should be done so as to maximise benefits from the resources but this should only be done after the domestic market has been satisfied [11]. The country is very ambitious to see this happening as earliest as possible. For example, the minister for energy and minerals, Professor Sospeter Muhongo, was recently quoted by media saying Tanzania will start exporting natural gas generated power as of 2015 [17].

Looking at all these, it appears that the government is very committed and ambitious to make natural gas of sustainable and equitable benefits to all. Efforts and plans that are in place for natural gas utilisation show the extent to which the government tries its best to make the discovery and utilisation of the resource a blessing to the country rather than turning out being a curse. However, it is important to note that making natural gas exploitation of equitable and sustainable benefit to Tanzania and its people requires more than what the government wants to achieve from the resource.

IV. Making Natural Gas Extraction of Benefit to all

The ultimate goal of the government in utilising natural gas is to make sure that benefits are maximised and the resource contributes to the transformation and diversification of the Tanzanian economy [11]. But this demands more than just power from energy or encouraging the establishment of various industries. Certainly, there is no doubt that energy and industries as well as other intended usages are relevant for the country's economic development. But if we want more out of the resource, we must move beyond the simple energy-industry-domestic and export schema.

Making natural gas of benefit to all requires that citizens are adequately involved in decisions regarding the use of the resource. This requires going down to people to learn of their expectations and aspirations from the resource [18] so that these could be taken in consideration when devising measures and strategies for making natural gas of benefit to all. For quite a long time, decisions over how natural resources should be used in Africa and Tanzania particularly have been made at the top and imposed on the people for implementation as if these people do not know what is good for them and as if the top leaders are better positioned to determine what is best for them. The consequence has been obvious: benefits from natural resources have failed to trickle down to the poor. Even where corporations have tried to devise 'good' corporate social responsibility programmes these have failed to significantly benefit the population mainly because they do not take in consideration people's views and needs [19]. Experience from Nigeria's oil and gas industry where unrests have characterised the country's oil rich Niger Delta due to the government not

involving local people in the extraction and use of oil proceeds [20] should be a lesson to Tanzania's efforts of making natural gas extraction of benefit to all.

It is very shocking to learn the government is not doing enough to mainstream local people's views, aspirations, and expectations from the resource into its natural gas utilisation plans. Such statement as there is no more time for discussion because doing so is wastage of time from the minister of energy and minerals [21] indicates how the government is not serious on valuing the opinions and aspirations of the people. This leaves one wondering over what kind of development the government wants to achieve if it does not want to go down to people to learn of their needs and expectations. As Sen [22] argues, development should be about giving people freedom to choose what kind of development they want. Thus, making natural gas of equitable and inclusive benefit to all is not only an issue of the government thinking about what is best for the country and its people but also being cognisant of the people's needs, aspirations and expectations from the exploitation of the resource.

Another important thing that needs to be done, but so far hasn't been done, is having a strong local content strategy that would detail how locals will participate in the subsector and how the government will strive to empower them take opportunities for their benefits and for the nation's benefits. The focus needs to be on balancing current needs and natural gas utilisation with future generation needs. Doing so requires empowering Tanzanians so that they can gradually take hold of the sub-sector and run it themselves for the benefit of present and future Tanzania. The national empowerment policy stresses the need to empower local citizens so that they can strongly compete and take centre stage in various investments for the country's development [23]. This must be the main goal of the ministry of energy and minerals to make sure that local people's and companies' capacities are enhanced to take active role in the sub-sector's upstream, midstream and downstream activities. Strengthening the technical, human and capital capacity of the Tanzania Petroleum Development Corporation (TPDC), the government's arm responsible for the development of the sub-sector, would also be desirable. It is good to learn from successful countries such as Norway where a national oil company, Statoil, was established and adequately nurtured by the state in a bid to make sure oil resources would be of benefit to the country. Today, Statoil is one of the strongest and best performing oil and gas multinational company.

Doing so will ensure that the sub-sector responds to the needs of the people of Tanzania. This will also have empowered the people to take advantage of the resource for the betterment of their lives and their country's development. Unfortunately however, the government is less concerned with empowering the locals to take lead in the sub-sector just because the Tanzanians are incapable of investing in the natural gas exploration and development activities. That local companies are only capable of investing in fruit processing factories [21] is not only an insult to local investors but also a reflection of the government's failure to empower them so that they can participate in all the upstream, midstream and downstream areas of the sub-sector. If we do not empower them, how will Tanzania's natural gas sub-sector be as successful as that of Norway and Netherlands? Shouldn't our experience from the poor performance of the mining sector be a good lesson on this?

Certainly, couching our development efforts on foreign direct investment will not be sustainable. Similarly, thinking that we can achieve development from corporations' sustainable/social responsibility activities is worthless. We need to go beyond the thinking that we cannot develop on our own without foreign investors/donors by encouraging local investors as well as strengthening state corporations such as TPDC to take active role in the sub-sector's development. Yes, we need foreign investors but not to the disgrace and marginalisation of local people and investors. If we do not do so, foreign investors will come and benefit from resource extraction and leave the majority of Tanzanians in poverty. They can, and actually do, invest in corporate social responsibility programmes which can be of benefit to local people but this is not sustainable and cannot take us to any sustainable level of development.

V. Conclusion

Tanzania is on the verge of becoming an important natural gas exporter in the east African region following recent natural gas discoveries that total 43.1 TCF. The government and some other Tanzanians are very optimistic of this development and believe that very soon the country will be riding on a gas led economy. This optimism is not born out of nothing but rather comes from the fact that Tanzania faces a number of economic and energy challenges which make natural gas appear as a viable solution to such challenges. This paper has demonstrated that making natural gas of equitable, inclusive and sustainable benefit to all people requires thinking beyond the simple schema of energy production, industrialisation, domestic consumption, and gas exports.

Certainly, such planned usages are very significant to the country's development in the light of the economic and energy challenges that it has endured for long but they are by no means the determinants of natural gas being of benefit to all. If we need to make natural gas of meaningful benefit to the people and the country, we need to focus on empowering people to speak out and determine what kind development they want as well as participate in the different natural gas exploration and extraction activities at all the upstream, midstream and downstream levels. This is crucial in making the resource locally owned and therefore directly connected and respondent to people's lives, needs and expectations.

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