

# Extractive resources- industrialisation linkages: Opportunities, challenges and lessons for Tanzania

Research Report: [EXTRACTIVE RESOURCES-INDUSTRIALIZATION LINKAGES, OPPORTUNITIES, CHALLENGES AND LESSONS FOR TANZANIA](#)

According to its Development Vision 2025, Tanzania envisions a middle-income economy that will have been transformed from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities which are effectively integrated and buttressed by supportive industrial and service activities in the rural and urban areas (United Republic of Tanzania, 2000). Extractive resources have been identified as one of the critical enablers of Tanzania's industrialisation. recent policy and legal reforms in the extractive sector as well as the broader development plans and strategies have sought to create stronger linkages between resource extraction and the broader economy as a strategy to achieve what several government documents describe as a resource-based industrialisation.

The confidence in promoting a resource-based industrialisation strategy stems from the country's rich natural resource endowments. Tanzania is not only endowed with gold and natural gas for which it is famously known but also a range of other industrial minerals, metals and other mineral resources. Minerals such as gold, iron ore, nickel, copper, cobalt, silver, diamond, tanzanite, ruby, garnet, limestone, soda ash, gypsum, salt, phosphate, gravel, sand, dimension stones and graphite, coal and uranium, natural gas and helium gas are abundantly found in several regions of Tanzania. In the past 20 years, a Foreign Direct Investment (FDI) based extractive strategy has greatly contributed to Tanzania's record economic growth which has averaged over 6%. However, despite impressive economic growth, several studies have shown that mineral extraction has failed to diversify Tanzania's economy, let alone benefiting it adequately (Curtis, 2012; Curtis & Lissu, 2008; Lange, 2011; Poncian, 2019b; Roe, 2016).

Much of the extractive resources-industrialisation linkages debate across Africa has focused mainly on mineral value addition and beneficiation as well as local content requirements. But what opportunities, challenges and lessons are there for Tanzania to realize resource-based industrialisation? There has been some considerable public discussions facilitated by civil society organisations on the linkages between resource extraction and industrialisation. For instance, during the 2018 Tanzania Extractive Industries Conference (referred to as *Jukwaa La Uziduaji*), the main theme of discussion was nurturing industrialisation through mining, oil and gas. The presentations and discussions throughout the two days centered around issues of revenue management, the business environment, local content, public participation in resource governance processes, policy and legal issues, etc. (HakiRasilimali, 2019b). However, while this platform provided an opportunity to ponder on how Tanzania's resource extraction can contribute to its grand goal of industrialisation, questions still remain on what opportunities and challenges really exist and what lessons Tanzania can draw from other countries which have (un)successfully charted the path of a resource-based industrialisation. What opportunities are there for extractive resources to catalyse Tanzania's industrialisation? Is there a relevant sectoral policy framework to guide Tanzania's resolve to use its extractive resources to catalyse industrialisation? What does the existing business environment offer in terms of fostering a resource-based industrialisation strategy? What more could be done to make business environment more favorable to resource-based industrialisation? How does the government define its resource-based industrialisation? Are there alternatives to its current resource-based industrialisation strategy? How can resource revenues be managed in such a way that they contribute to industrialisation? These questions which the 2018 *Jukwaa la Uziduaji* did not satisfactorily attend to necessitated carrying out this study to further explore how Tanzania's resource-based industrialisation can realistically be achieved.

- **Summary of key themes and findings**

- ***Resource extraction and industrialisation linkages***

Creating strong linkages between resource extraction and industrialisation is very challenging because it is very much context specific and is conditioned by enabling policy and legal framework, human and technical resources, and the political economy of development at national and global levels (Fessehaie & Rustomjee, 2018; Jourdan, 2013; Morris, Kaplinsky, & Kaplan, 2012; Ramdoo, 2015). As one academic staff remarked, linkages between extractives and industrialisation 'do not come magically, you have to create them' (Interview with

Academic Staff 2, 18 August 2019). Nonetheless, the literature point to the fact that resource extraction can bolster industrialisation through creating various linkages, namely, forward, backward, infrastructure, revenues, and knowledge linkages. These linkages are not only relevant to making resource extraction bolster industrialisation, but they are equally important in linking the extractive sector to the rest of the economy.

Forward linkages forward linkages involve mostly the resource extraction sector supplying raw materials for industrialisation. It mostly involves mineral value addition and beneficiation activities i.e. processing minerals to produce intermediate or finished goods instead of exporting them in raw form. Forward linkages are good for retaining more wealth in the country, and promoting employment, industrialization and economic diversification (UNCTAD, 2017a). as we shall see subsequently, mineral value addition and beneficiation forms much of Tanzania's government policy for extractives-industrialisation linkages.

Backward linkages entail how the extractive sector links back to the rest of the economy in terms of how different economic sectors service the extractive sector. It involves subcontracting, supplier contracts, input service collaborations, among others (Buur, Therkildsen, Hansen, & Kjær, 2013). In most cases, backward linkages revolve around local content and corporate social responsibility with a major focus on local procurement of goods and services, and employment and training of the local workforce. Backward linkages are by far the most beneficial and have a greater development potential relative to forward linkages which are understandably capital intensive and generate limited further linkages (Buur et al., 2013). However, backward linkages in poor countries tend to be constrained by limited local capacity issues, ambiguous and non-enforcement of local content rules and limited intra- and interfirm cooperation (Ackah & Mohammed, 2018; Anderson, 2016; Calignano & Vaaland, 2018; Kinyondo & Villanger, 2017).

Fiscal/revenue linkages involve two main aspects: the way in which revenues are generated from resource extraction and how the generated revenues are managed and/or spent to bolster economic transformation. The proper use of relevant fiscal tools such as taxes, royalties, levies, and so forth can help resource-rich countries maximize financial benefits from their resource extraction. This then can be used in the promotion of industrialisation through, for instance, funding critical interventions in non-commodity sectors (UNCTAD, 2017a). Fiscal linkages are, however, likely to be limited by two main challenges: revenue management and the feasibility of resource revenues to finance industrialisation interventions given the volatile nature of resource revenue flows.

Infrastructure linkages between resource extraction and industrialisation and/or the broader economy manifests in terms of building essential infrastructure to facilitate resource extraction which in turn create further linkages to industrialisation and the rest of the economy (Collaborative Africa Budget Reform Initiative (CABRI), 2016; UNCTAD, 2017a). Tanzania government's resolve to invest in mega energy production, and transport infrastructure should be understood as an aspect of forging stronger linkages between resource extraction and the rest of the economy.

Finally, knowledge linkages involve measures to create a knowledgeable local workforce and firms to service the extractive sector, as well as technology transfer and sharing. It applies to both the 'the corporate sector, where various technical skills are inadequate and need to be improved, and the government sector, where the skills base for appropriately analyzing and regulating the industry ... is invariably weak' (Collaborative Africa Budget Reform Initiative (CABRI), 2016, p. 22). Knowledge linkages are critical because they act as enablers of all other linkages.

- ***Extractive resources-industrialisation linkages: Experience from other countries***

Learning from the experience of other countries that have (un)successfully pursued resource-based industrialisation in the past can help contextualize similar efforts in Tanzania. To this end, we analysed the experience of four countries, namely, USA, Norway, South Africa and Zambia. From the experience of these countries, several lessons for Tanzania were drawn. These are as follows.

First, resource-based industrialisation is possible for Tanzania provided the government puts in place an enabling policy framework and invest heavily in human and technical resources. The USA cases demonstrate that linking resource extraction to industrialisation can be achieved by making resource extraction an integral part of broader national development process. This was achieved by putting in place a supporting legal framework; investment in public knowledge infrastructure; and placing emphasis on education in mining, minerals and metallurgy (Wright & Czelusta, 2007).

Second, proper revenue management and state participation in resource extraction are critical if resource extraction is to result in meaningful economic transformation. The successful transformation of the Norwegian economy following oil extraction hinged very much on how the country managed its oil

revenues and how it integrated the oil sector to the rest of the economy (Holden, 2013). Proper and transparent revenue management is significant in overcoming the Dutch Disease which can frustrate a country's resource-based industrialisation goals. State and public participation in resource extraction is also important in determining a country's success to pursue resource-based industrialisation. It is important to note that Tanzania has recently taken measures to promote state and public participation in resource extraction, revenue management and has made some commitments to improve its technical capacity in geological surveys.

Third, policy congruence is a prerequisite for extractive resources-industrialisation linkages. There must be congruence between extractive sector policies and legislation and broader development framework. Any in-congruence in sectoral and broader national development framework is likely to frustrate efforts to forge linkages between extractive resources and industrialisation. Experience from Zambia where there appears to be in-congruence between extractive policy goals and the broader development framework is relevant in this case (Fessehaie & Rustomjee, 2018). This Zambia's experience points to the fact that resource-based industrialisation does not only require putting in place a specific policy framework but also ensuring that sectoral policies are in congruence with extractive policies as well as the broader national development policy framework.

Finally, South Africa has sought to push for resource-industrialisation linkages through an enabling policy framework and investment in mineral value addition and beneficiation by establishing the Titanium Center of Competence in 2009 (Economic Commission for Africa, 2017; Republic of South Africa, 2011). South Africa's experience, though still too early to produce anticipated outcomes, shows that the government plays a critical role in realizing resource-based industrialisation not only through putting in place relevant infrastructure and an enabling policy framework but also by playing a coordinating role that would ensure that it opens up the local mining industry to the international markets by leveraging trade agreements (Republic of South Africa, 2011).

- **Resource extraction-industrialisation linkages: the Tanzania's experience**

Tanzania has increasingly sought to leverage its natural capital stock to industrialize its economy. The key goal has been to promote an industrialisation strategy that leverages Tanzania's natural resource capital. It should, however, be noted that efforts to promote a resource-based industrialisation have been around

in Tanzania since as far back as the socialist years when the government sought to promote an Import Substitution Industrialization (ISI) strategy by leveraging local resources. The only exception is during the colonial period when resource extraction was part of the broader colonial economic system which sought to produce and export raw materials to feed the European industries. There were no attempts to link mineral extraction to the rest of the economy throughout the colonial period (Lissu, 2001; Poncian, 2019a).

During the early years of independence (1961-1966), two development plans were adopted, namely, the Three-Year Development Plan (TYP 1961-1964) whose focus was promoting growth mainly through increasing investments in activities such as cash crop farming that were expected to bring quick and high returns (Supporting Economic Transformation, 2016). This was then replaced with the first Five Year Development Plan (1964-1969) which introduced a growth agenda with emphasis on import substitution starting with simple consumer goods (Resnick, 1981; Supporting Economic Transformation, 2016). A major emphasis was placed on attracting local and foreign investment into the country. Resource extraction activities were thus defined in terms of their role in facilitating quick development gains, a role which meant that greater emphasis continued to be more on export of raw minerals and less on linking the mineral sector to the broader economy. The mining sector during this time remained considerably small given the fact that not much was achieved in terms of expanding mineral exploration and extraction activities (International Bank for Reconstruction and Development, 1975; Resnick, 1981).

Things started changing radically during the socialist era (1967-1980s) when Tanzania adopted a radical statist approach to development. This period involved the establishment of state enterprises, namely, TPDC and STAMICO, to oversee state interest in the extractive sector. It was also characterized by nationalization involving the nationalization of resource ownership and requirement for state participation in all resource extraction projects. In terms of industrialisation, it should be noted that the socialist era was all about promoting an import substitution industrialisation (ISI) strategy with efforts taken to encourage domestic production of consumer goods. The mining sector was thus positioned to play a role towards the realization of this goal. This would be achieved through local content requirements which, for the first time, became a legal requirement, and through the use of local mineral materials for industrialisation. Some examples include of mining linkage with the manufacturing sector during the socialist era is the Wazo Hill cement factory. The factory was opened in 1962 to

locally produce cement instead of the original plan for the Tanzania Portland Cement Company which was established in 1959 to import bulk cement (Vleuten et al., 2001). The Wazo Hill factory began production in 1966 using basic raw materials extracted from within the factory vicinity (International Bank for Reconstruction and Development, 1975). It was wholly nationalised in the early 1970s and placed under the State Mining Corporation (STAMICO) (International Bank for Reconstruction and Development, 1975). Other cement factories utilizing locally mined raw materials were opened in Tanga (1980) and Mbeya (1983) (Stewart & Muhegi, 1989). Other relevant mineral value addition activities included diamond cutting which was under the Tanzania Diamond Cutting Company Ltd, a subsidiary of STAMICO (Jourdan, 1990).

Despite efforts to fit the mining sector into Tanzania's ISI strategy, the sector remained relatively small. Similarly, nationalization measures undertaken during this period meant that private led mineral exploration and extraction activities were curtailed. By the 1980s, the mining sector had virtually become dysfunctional. For example, whereas the sector contributed 34% to GDP in the early 1960s, by 1988 this had declined to just 1% and 0.3% of national revenue (Lange, 2006, p. 3). In the mid-1970s, mining's contribution to gross national product, exports and wage employment was as low as 2%, 8% and 1% respectively (International Bank for Reconstruction and Development, 1975, p. 1). The sector was so small that it could not even supply adequate raw materials to local building material producers, a fact that can be explained by limited investment in mineral exploration and extraction (Ligny, 2001).

The 1980s-2000s era ushered in neoliberal market reforms which sought to privatize resource extraction as a measure of attracting in Foreign Direct Investment (FDI) and expanding mineral production and export. The World Bank's Strategy for African Mining became a reference document for Tanzania as it reformed its mineral sector policy and legal framework in 1997 and 1998 which completely overturned socialist policies and replaced them with a neoliberal, market friendly regime whose aim was to attract large scale foreign direct investment into the mining sector. Tanzania further adopted an overgenerous fiscal framework characterized by low tax and royalty rates, tax holidays, provisions for profit repatriation, laxity in expatriate employment and in other local content areas (Curtis, 2012; Curtis & Lissu, 2008; Poncian, 2019b). As such, resource extraction remained an enclave activity with very limited linkages with the economy and industrialisation. Although the 1998 Mining Act provided for local content requirements such as employment and training of Tanzanians and

local procurement of goods and services, no measures were taken to enforce these legal requirements, further making it harder for resource extraction to contribute to industrialisation and/or economic transformation.

The limited benefits and poor linkages between resource extraction and the broader economy ushered in another era and somewhat radical resource nationalist reforms from 2005 to the present. This era involved policy and legal reforms that seek to entrench state and local participation in resource extraction, local content requirements, new fiscal terms to boost revenue collection, and mineral value addition and beneficiation. These reforms started in 2009 with the formulation of the mineral policy and peaked in 2017 with the passing of three pieces of resource nationalist legislation. The implication of resource nationalist reforms on extractives-industrialisation linkages are considered below.

- ***Extractive sector legislative and broader development framework in relation to resource extraction and industrialisation linkages***

We have noted above that resource nationalist reforms started in 2009 with the formulation of the mineral policy. Since then several sectoral policy and legal reforms as well as broader national development plans and strategies have been undertaken. These include the mineral policy of Tanzania, 2009; the Mining Act, 2010; the National Strategy for Growth and Reduction of Poverty, 2010; the first Five Year Development Plan, 2011/12-2015/16; the Long Term Perspective Plan, 2011/12-2025/26; the National Natural Gas Policy, 2013; the Integrated Industrial Development Strategy, 2011; the Petroleum Act, 2015; the Oil and Gas Revenue Management Act, 2015; the Tanzania Extractive Industries (Transparency and Accountability) Act, 2015; the second Five Year Development Plan, 2016/17-2020/21; the Natural Gas Utilisation Master Plan, 2016; the Written Laws (Miscellaneous Amendments) Act, 2017; the Natural Wealth and Resources Contracts (Review and Re-Negotiation of Unconscionable Terms) Act, 2017; the Natural Wealth and Resources (Permanent Sovereignty) Act, 2017; the Mining (Local Content) Regulations, 2018; the Petroleum (Local Content) Regulations, 2017; and the Mining (Mineral Beneficiation) Regulations, 2018.

Broadly, these legislative and broader development frameworks provide the context within which to analyse Tanzania's resource-industrialisation strategy. They broadly seek to achieve resource-based industrialisation through increasing revenue collection and improving revenue management through transparency and accountability, mineral value addition and beneficiation, local content



requirements, infrastructure, establishing resource-based factories such as those for cement and fertilizer production, etc.

Broadly, the legislative and broader development framework reveals high congruence between extractive sector goals and broader national development goals, a clear sign that Tanzania is bent on capitalizing on its extractive resources to achieve industrialisation. These several policies, laws and regulations and development strategies also create several opportunities for linking resource extraction to the broader economy through, mainly, local content requirements and mineral value addition and beneficiation. Nevertheless, several challenges still stand in the way of Tanzania's resource-based industrialisation. Notably, these include Policy and regulatory unpredictability; lack of policy implementation strategies; lack of a clear vision to link extractive sector with industrialization i.e. how does Tanzania want to tap into extractives for industrialisation beyond local content? Others include lack of incentives for private sector and foreign companies coupled with conflicting economic policy; lack of state commitment to finance extractive-industrialisation linkages; increasing lack of political space for alternative ideas which might stifle relevant innovations for transforming resource extraction into one that promotes industrialisation; and limited skills and local capacity to take advantage of local content opportunities.

- ***Business environment***

Lessons drawn from the analysis of cases presented earlier (Norway, USA, South Africa and Zambia) point to an inevitable conclusion that an enabling business environment is crucial for resource extraction to contribute to industrialisation. The expansion in extractive resource activities during the period from the late 1990s to 2000s was to a great extent driven by government resolve to improve the business and investment environment in order to attract and retain foreign direct investment. However, recent measures taken to undo the consequences of market reforms in the extractive sector have made the business environment more challenging. These measures have sought not only to increase the sector's contribution to national economy but also to promote active state participation in resource extraction beyond its earlier regulatory and facilitation role. There have also been policy changes, as discussed previously, seeking to entrench local content provisions as a measure to promote participation of Tanzanians across the mining and oil and gas value chains. Further measures taken by the fifth phase administration since 2016 have amplified fears over the predictability of the

business environment. The Tanzania government-Acacia Mining Plc row that has dominated international and local media reports has further made matters worse.

Reports have shown that there has been a decline in FDI inflows in the past three years (UNCTAD, 2017b). For instance, FDI flows to Tanzania declined by 15% to US\$1.4 billion in 2016 mainly due to the country's regulatory environment and tax policies towards foreign firms (UNCTAD, 2017b). In 2018 FDI inflows to Tanzania also declined by 14% to US\$1.2 billion compared to 2016 (UNCTAD, 2018). The UNCTAD report further notes that policy changes in tax administration and mining royalty made foreign investors hold back their investments (UNCTAD, 2018). The changing and uncertain business environment had further adverse impact on revenues accrued from extractive activities. It has been reported that revenues from resource extraction shrank from 1,507 in 2016 to 1,020 billion shillings in 2018 (HakiRasilimali, 2019a). If anything, these figures suggest that changes in the business environment have a direct impact on investment decisions, production and the likelihood of industrialisation being realized.

Recognizing the importance of improving the business environment for industrialisation, the government has been taking measures to both improve the business and investment environment as well as win back investor confidence. The government has made this a policy commitment in its second Five Year Development Plan (United Republic of Tanzania, 2016). Other measures taken to improve the business environment include the publication of the Blueprint for regulatory reforms to improve the business environment. The Blueprint aims to improve Tanzania's business environment and attract more investors. Particularly, the Blueprint seeks to address five key business regulatory challenges. These include: 1) existence of high compliance costs in monetary terms and time in starting and operating business; 2) cumbersome pre-approval procedures, which create rent seeking opportunities; 3) presence of a multiplicity and duplicity of processes; 4) detrimental loopholes in some of the laws and regulations that are applied by regulators during the conduct of inspections; and 5) prevalence of high costs in enforcing implementation of regulations, both at the central and local levels (United Republic of Tanzania 2018a, XI).

There have also been measures to expand and improve the infrastructure; most notably, for energy production, transport and communication. Some flagship infrastructural projects include the Rufiji hydroelectric power production, the standard gauge railway, the revival of Air Tanzania, improvements at the Dar es Salaam port, and several others. Finally, the government has taken measures to

engage with the business community and other private sector stakeholders including artisanal and small-scale miners in meetings organised by the state and those organised by the private sector. The government has used many of these meetings to address key concerns of stakeholders including hinting at tax reforms as well as governance measures to improve service delivery at the Dar es Salaam port.

- ***Artisan and small-scale mining (ASM) and industrialisation***

Artisan and small-scale mining is a relatively large sector in terms of the number of people directly depending on it for their livelihoods. The sector employs between 600,000 and 1,000,000 artisanal miners, accounts for up to 15% or more of total gold production and dominates much of the gemstone production (Kinyondo and Huggins 2019). However, despite its seeming economic significance, ASM has remained a contentious sector with policy-makers often describing it as an illegal and/or troublesome sector.

In Tanzania, the fifth-phase administration has built on early measures to further promote the interests of the ASM sector. Measures taken by the government to regulate, formalize and promote the development of the sector include presidential order to rescind a large-scale mining licence and redistribute the site to ASM miners; regulation of labour practices; establishment of mineral centers in several regions of Tanzania to formalize and regulate minerals trading; government order to move the Tanzanite auction from Arusha to Mererani; a ban on export of raw gemstones as a means to promote some local mineral beneficiation; building the wall around the Tanzanite mining site in Mererani; increased government and donor support to ASM; and policy and legal reforms to provide for designating areas/land exclusively for ASM activities (Kinyondo and Huggins 2019; Huggins and Kinyondo 2019; Hundsbæk et al. 2019). Other measures include the formulation of The Mining (Mererani Controlled area) Regulations 2019 with the purpose of ensuring high security, effective management of the mining activities and environmental issues in/and around the wall. The regulations declare Mererani as Controlled area.

While these measures are notable, it remains to be seen how these measures can spur an ASM-linked industrialisation in Tanzania. Some studies have shown that recent legislative measures are actually likely to impact negatively on the ASM sector, thus limiting the sector's contribution to Tanzania's grand goal of industrialisation (Huggins and Kinyondo 2019; Hundsbæk et al. 2019). In fact, as one academic staff member remarked, recent measures to formalize the ASM

sector ‘have less to do with building the capacity of artisanal and small-scale miners and more to do with recognizing them for taxation purposes’ (Interview with Academic Staff 2, 18 August 2019). Despite being the sole suppliers of raw minerals to jewelers and other mineral processors, ASM continues to be characterized by shorter value chains typically ending with raw mineral trade (Interview with NRGI, 1 August 2019).

Local mineral beneficiation for which ASM has a major role to play continue to be plagued by limited technical and financial capacity as well as limitations in terms of meeting the local demand for beneficiation (Huggins and Kinyondo 2019). This calls for strong measures and commitment to promote capacity building, technical and financial support as well as rethinking some resource nationalist provisions to make it possible to attract foreign capital and technology into the ASM and mineral beneficiation sectors. Finally, since the ASM sector has greater potential for stronger linkages, its regulation and formalization should be approached cautiously; its formalization should not be a rigid system whose aim is to integrate the artisanal and small-scale miners into the broader economic system (Interview with a representative from Repoa, 20 August 2019).

- ***Gas projects and industrialisation***

Natural gas appears to be intrinsically linked to Tanzania’s industrialisation, at least judged from the governance and institutional reforms undertaken by Tanzania in the sector during the past seven years. Some of these reforms include the formulation of the natural gas policy (2013) and the national energy policy (2015), the enactment of the petroleum, and the oil and gas revenue management laws in 2015. Other measures include the establishment of a national oil company to represent government interests in the sector, the establishment of the Petroleum Upstream Regulatory Authority (PURA) for regulating upstream activities, and the Energy and Water Utilities Regulatory Agency (EWURA) for regulating mid- and downstream oil and gas activities. There have equally been great efforts to invest in relevant infrastructures for smooth natural gas extraction, processing and transportation. Key infrastructure projects in the gas sector include the completion of the Mtwara-Lindi-Dar es Salaam gas transmission pipeline, and the erection of gas processing plants in Mtwara and Lindi regions and others in Dar es Salaam.

It apparently appears that the government seeks to make the most out of natural gas extraction by, among others, leveraging it to bolster industrialisation. In fact, the National Natural Gas Policy considers facilitating wide domestic utilization of natural gas to achieve rapid broad-based growth and socio-economic

transformation through applying it in industries, transportation, institutions, and households; electric power generation and gas to liquids (GTL) conversions; and as a raw material for products such as fertilizer, methanol and ethanol (United Republic of Tanzania 2013). As discussed earlier, the NGUMP provides a road-map on how natural gas will be utilized showing, among others, linkages between natural gas and the rest of the economy as well as liquefied natural gas production for export, a mega project estimated to require US\$ 30 billion of investment. The National Energy Policy and petroleum regulations discussed earlier also emphasize local content requirements as a strategy to make natural gas extraction respond and contribute to Tanzania's industrialisation and economic transformation.

While it is notable that gas projects mentioned above have great potential to contribute to industrialisation, the realization of this potential appears to be less certain. First, the prospects of the LNG project which would be a game changer in the sector remain uncertain as negotiations for a Host Government Agreement (HGA) and a final investment decision continue to be delayed (Lewis 2018; LNG World News 2016). Second, there appears to be uncertainty and government unpredictability over whether it still wants to go ahead with the LNG project, or it has changed its priority. This is further compounded by the government's move to commission the Rufiji Hydroelectric power project which appears to have taken much of the government attention in relation to natural gas. A change in government from President Kikwete to Magufuli may have more to do with the delays. To make matters worse, the 2017 legislative reforms impacted negatively on the negotiations as investors grew warily of the country's unpredictable policy landscape. Critical legal issues which appear to have slowed progress towards an HGA and an LNG final investment decision include those banning international arbitration of disputes (Interview with an MNC, 22 August 2019). As one academic staff remarked, this legal and policy unpredictability have not only delayed the LNG final investment decision but have equally made companies downscale on their activities including closing some of their offices and cutting back on jobs (Interview with Academic Staff 2, 18 August 2019). It remains to be seen how a resource-based industrialisation can be realistically achieved in these conditions.

## • **Conclusions and Recommendations**

This study sought to examine opportunities, challenges and lessons for the realization of a resource-based industrialisation strategy that development policy and strategies aspire to achieve. A critical review of scholarly literature,

government policy as well as other documents; analysis of selected country experiences to draw some lessons for Tanzania; and interviews with relevant informants were the key methods used to address the study's main purpose.

From the foregoing analysis, there is great potential for resource extraction to contribute greatly to Tanzania's industrialisation agenda. This is because of several factors, namely:

- Being endowed with a range of extractive resources with direct contribution to industrialisation.
- Strong political will and constant government push for industrialisation.
- Ongoing regional initiatives such as the Africa Mining Vision.
- An enabling policy and legal framework within the extractive sector itself and the broader industry sector.

While there is great potential for resource extraction to contribute to industrialisation, there exist challenges which, if not addressed, may inhibit the development of strong extractive-industrialisation linkages. Some of these challenges include:

- Policy and regulatory unpredictability
- Lack of policy implementation strategies
- Lack of a clear vision to link extractive sector with industrialization i.e. how does Tanzania want to tap into extractives for industrialisation beyond local content?
- Lack of incentives for private sector and foreign companies coupled with conflicting economic policy
- Lack of state commitment to finance extractive-industrialisation linkages
- Increasing lack of political space for alternative ideas which might stifle relevant innovations for transforming resource extraction into one that promotes industrialisation.
- Limited skills and local capacity

Lastly, from the analysis of selected country cases and that of Tanzania, the following key lessons/ recommendations can be drawn:

- Linking resource extraction to industrialisation requires a strong and enabling policy and legal framework. The existing policy and legal

framework as well as the broader development framework have potential of linking resource extraction to industrialisation. This, however, will have to go hand in hand with crafting a clear implementation strategy to translate extractive and industrial policy goals into reality.

- There needs to be a clear strategy for local skills and capacity enhancement. Putting in place strong local content and corporate social responsibility requirements may be a starting point, but this is unlikely to result in anticipated outcomes if a clear strategy is not formulated. The government ought to walk by its talk in terms of expending development resources to build capacity for its state-owned enterprises. Furthermore, capacity of local players can be built through training and linking them with internal mentors. This is good for knowledge transfer which will ensure local players have the required capacity going forward.
- Streamlining the business and regulatory environment to attract in and retain investors. Existing efforts to improve the business environment are a welcome development but these need to be scaled up and implemented vigorously. There is also need for the government to come out clearly about its economic vision and role of private sector instead of sending conflicting messages.
- The government should come up with a clear vision on how extractives will link with industrialisation. The government ought to be clear about how it defines the role of extractives in industrialisation: does it envision a resource-based industrialisation or one in which resource extraction contributes? In other words, it is important for Tanzania to know what it wants to achieve from its resource extraction. This will help the government focus its limited resources and capacity to achieving what it seeks to achieve instead of implementing a strategy that seeks to achieve everything from resource extraction.
- A successful transformation of resource extraction into one which contributes meaningfully to industrialisation requires open governance and strong accountability mechanisms. Norway's success in transforming its oil sector and managing its sovereign wealth fund lies in its transparent and accountable governance. Recent crackdown on political space and withdrawal of Tanzania from OGP membership amidst existing legal commitments to transparency and accountability

in resource extraction may do more to limit the prospects of industrialisation.

- Artisan and small-scale mining has great potential to drive small and medium enterprises. Current measures to formalize the sector do not do much to build capacity and strengthen the sector's value chain. The government could do well by linking recently established mineral marketing centres to mineral beneficiation and value addition.
- Forging strong extractive-industrialisation linkages hinges on smart and strong public-private partnerships. This, in turn, requires collaborative decision-making to ensure that the resulting industrialisation strategy is a shared one.
- While it may be tempting to see resource revenues as a viable funding source for industrialisation, the reality is that such revenues are unpredictable, and their flow is not substantial enough to support the ambitious industrialisation goals. Government plans to use resource revenues as one funding source to finance interventions for industrialisation needs to be revisited especially as evidence point to a decline in revenue receipts in the past four years.
- There is need to establish clear benchmarks to effectively monitor progress towards linkages implementation. As a country, Tanzania should also come up with reasonable targets and monitor compliance overtime. TEITI, the media and Civil Society Organisations can play a critical role in monitoring the implementation of local content requirements and other industrialisation interventions.
- Rent-seeking should be discouraged especially as there is danger of few well-connected elites to tap into lucrative opportunities in linkage formation. Rent seekers are usually not committed to building long-term linkages, they are instead focused on short-term financial gains. If not checked, this is likely to reproduce the resource curse.
- Finally, since the existing resource extraction projects are nearing closure and/or exhaustion, more emphasis ought to be put on building a larger natural resource base through more exploration and development of new mines. This can also be done through promoting sectoral stability, growth and expansion. The focus should be more on increasing production. This way, Tanzania will be assured of a steady supply of raw materials for beneficiation and processing as well as revenues.
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