3-1-2022

Addressing gender inequality through employment and procurement: Local content in Tanzania's emerging gas industry

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Abstract

Gender is an overlooked area when it comes to local content. Few, if any, local content laws and regulations for the extractive industries globally contain any specific provisions related to gender equity or female empowerment. In the wake of the COVID-19 pandemic, shortening and simplifying supply chains has become an imperative for multinational firms. Formal employment in oil extraction is traditionally male-dominated. In Tanzania, employment in this sector is estimated to be over 80 percent male. However, the negative impacts of the industry, especially in terms of social disruption and dislocation, environmental degradation, and loss of livelihood, are more likely to be felt by women. This paper explores gender dimensions of local participation in the extractive industries, economic empowerment, and provisions mandating and setting targets for women's participation in Tanzania's gas emerging industry. It is argued that the government must pursue a holistic approach to gender equality in legislation, regulation, policy, education and training in order to maximize the benefit from extractive industries and petro-development.

1. Introduction

Since discovering gas in 2012, Tanzania has been preparing to maximize the benefit from its newfound energy resources. Typically associated with Dutch disease and resource curse, petroleum resources—

especially of the size discovered by BG Group (now part of Royal Dutch Shell), Statoil ASA, and their partners (estimated to be at least 57 trillion cubic feet of gas)—nevertheless represent enormous potential for a developing country such as Tanzania.

The development benefits associated with oil and gas accrue primarily to the state in the form of rents, royalties and taxes. Additionally, an economic benefit may be realized from new employment and economic activities, though the petroleum and petroleum service sectors are traditionally male dominated and in Tanzania are estimated to be over 80 percent male (VETA 2016). However, the negative impacts of the industry, especially in terms of social disruption and dislocation, environmental degradation and loss of livelihood, are more likely to be felt by women (Eftimi et al. 2009; Scott et al. 2013; Hill et al. 2017).

Preparing for gas production has involved creating a new legal framework for petroleum resources and to manage the possibility for state-led development (Ovadia 2016c). This framework encompasses all aspects of local content, including developing the technical and vocational education and training (TVET) needed to ensure local participation. In creating this framework, there are numerous opportunities to ensure the participation of women in the sector and to promote women's labour market opportunities in order to work toward gender equality and the empowerment of women and girls in line with Goal 5 of the United Nations Sustainable Development Goals (SDGs). However, in the case of Tanzania many opportunities to include a gender dimension in local content policies (LCPs) were not taken up.

This paper explores the gender dimensions of economic empowerment and local content provisions in Tanzania's gas sector. While embedded as a consultant with the National Economic Empowerment Council (NEEC) in 2017, I began to see that local content and women's economic empowerment (WEE)

are often viewed as separate areas of public policy in Tanzania. This paper emerged from my reflections upon completion of the project that local content and WEE can be brought together to provide the technical skills and experience necessary to participate in the industry directly and through the participation of women-led micro, small and medium-sized enterprises (MSMEs) in the gas value chain. My core insights on this topic were developed by engaging with literature I identified on gender in the oil and gas industry, WEE, TVET, and MSMEs in Tanzania.[1]

My reflections, observations, and research has led me to recognize that direct employment and opportunities for MSMEs to supply goods and services to the emergent gas industry must involve not only economic empowerment policies but also the mandating and setting of targets for women's participation in Tanzania's emerging legal regime for local content promotion and the country's strategy for offering TVET and MSME development training to women.

When it comes to the legal regime for petroleum, there is only one recent initiative to increase gender in procurement by amending the Procurement Act to require that 30 percent of contracts be given to women-led companies. The local content framework itself remains silent on the question of women's economic empowerment. Therefore, it is argued that the government must pursue a holistic approach to gender equality in legislation, regulation, policy, education and training in its emerging oil, gas, and mining sector in order to maximize the benefit from extractive industries and promote petro-development.

[1] An earlier version of this paper was presented at the Gender, Work & Organization conference in Sydney in 2018. I thank the organizers in participants. I would also like to acknowledge support and guidance from the National Economic Empowerment Council of Tanzania, and especially its Executive Secretary, Beng'i Issa and Director of Local Content, Esther Mmbaga, for their openness and insights. All errors and omissions are my own.

2. Gender in Tanzania's Extractive Industries

Research on gender and the extractive industries has shown that the benefits and risks of resource extraction are distributed unequally among different segments of the community. Men have greater access to benefits such as employment and income. Meanwhile, women are more vulnerable to the impacts of oil, gas, and mining projects (Eftimi et al. 2009, 1).

Hill et al.'s (2017) work underlines that the impacts of mining, oil and gas projects are not gender neutral. Extractive companies often fail in terms of adequate consultation and compensation for the loss of land and land-based livelihoods. Additionally, pollution can lead to chronic illnesses, increasing the women's unpaid care work. Finally, they write, forcing people off their land, "can increase workloads for women in providing for their families where women are traditionally responsible for meeting the subsistence needs of families and are no longer able to do so" (Hill et al. 2017, 4).

In recent years, there has been increased research not only on the gendered impacts of the extractive industries, but on what Bradshaw et al. describe as "patriarchal power relations between men and women" and how they are "produced and reproduced within extractive industries" (2017, 439). They look at "extreme and exaggerated gender roles and relations" within the industry and especially at sites of extraction. They then contrast this with the "supernormal profits" to be made, which they suggest "encourage the development of 'supernormal patriarchy'" (2017, 439).

When it comes to the oil and gas sector specifically, Scott et al. (2013) talk about a gender asset gap, a gender information gap, and a gender vulnerability gap. However, it seems that more research has

focused on the human security and human rights dimensions of gender and the extractive industries[2], than on information asymmetry, or gender gaps in opportunities.

One possible explanation for the lack of focus on creating opportunities for women is that there is often a distinction made in the approaches on many governments and even civil society organizations between petroleum management (including the promotion of policies to increase local content) on the one hand and women's empowerment on the other. In the case of Tanzania, which only recently discovered large reserves of gas, this divide has had numerous impacts even though the new reserves are yet to be extracted. Sax and Tubb (2021) write about the "buzz" and expectations generated by a new petroleum find.[3] However, this "buzz" may drone out voices calling for a gender sensitive approach. Perhaps for this reason, Wyndham and Lange suggest that in Tanzania, "gender dynamics are a lesser concern than people's immediate interest of seeing tangible benefits from the resource" (2019, 130).

Although they approach the topic from very different perspectives, Bradshaw et al. and Eftimi et al. both focus on the different roles men and women have in the extractive industries. Bradshaw et al. (2017) see these different roles as an expression of patriarchal power while Eftimi et al. (2009) argue that a better understanding of gender aspects of the extractive industries could improve development outcomes in impacted communities, as well as improving the economic and social sustainability of extractive industry projects. This point applies not only to the negative impacts, but also to the benefits such as employment and income. They go on to note that in addition to gender discrimination in hiring in the extractive industries, there are also gender dimensions to extractive industry sector restructuring (Eftimi et al. 2009, 11).

[2] For a good review on this topic, see Andrews and Enns, 2020.
[3] For more on this in the African context and with regard to the anger and conflict that can emerge from this "buzz", see Ovadia et al. (2020).

These insights are an opening to examine what various actors can do to address gender in the extractive industries. For governments, Eftimi et al. suggest they look at creating new laws and regulations, clarifying existing ones, promoting WEE, improving monitoring and evaluation and reporting requirements, ensuring representative structures, promoting capacity building, providing child care, enforcing gender monitoring and regulations, gathering gender-disaggregated information, appointing gender focal points, encouraging and supporting local banks to promote women's access to financial services, and more. Meanwhile, companies working in the extractive industries should encourage female employment, make the extractive industries more gender and family friendly, ensure equal pay for equal work, promote women's employment in spin-off and service provider employment, assess shift patterns, provide women with female-friendly equipment, uniforms, and facilities, increase economic empowerment, design participatory monitoring and evaluation systems, appoint gender focal points, include women in community consultations, define clear strategies for gender-sensitive activities, provide gender-sensitive training, and more (Eftimie et al. 2009, 30-34).

These policy prescriptions may not be a fully adequate response to patriarchal power, but they can have an impact. In the mining industry, Lahiri-Dutt has argued that a "feminization of mining" is beginning to occur as more women enter mining with "an expanded notion of mining as a livelihood" (2015, 523). She argues that these initiatives are occurring as industrialized mining mainstreams gender and civil society pushes for change with new policy initiatives. However, when it comes to oil and gas, there is no evidence that any such transition has begun. According to Lange and Wyndham, as enlightened a company as Norway's Equinor has failed in Tanzania to makes its investment in the country's gas sector gender sensitive or to alter the fact that the main beneficiaries of that investment are men (2021, 1).

Therefore, there is still a great deal of work to be done to increase women's participation in the gas sector and promote more opportunities for women in this important sector.

Neither the involvement of a company that comes from a country that prides itself on promoting gender equality nor the formal gender equality enshrined in Article 9 of Tanzania's constitution (URT 1995, cited in Daley et al. 2018, 11) are sufficient on their own to create better outcomes without an approach that focuses on specifically targeted interventions. Daley et al. note that Tanzania has measures to prohibit discrimination based on sex, gender or marital status and to mainstream gender perspectives within policy-making in Development Vision 2025, the National Women and Gender Development Policy and National Strategy for Gender Development of 2000, the 2004 Employment and Labour Relations Act and National Employment Policy of 2008, and the Mkukuta II. Yet, gender inequality persists (Daley et al. 2018, 11). There is therefore something important in what Bradshaw et al. call "supernormal patriarchal relations". They argue for addressing the production and reproduction of these relations in order to "promote gender equality and natural resource justice, as part of an agenda to redistribute wealth gains from natural resource extraction" (Bradshaw et al. 2017, 439).

Such an approach would at a minimum require revising the policies that govern the extractive industries. Daley et al. note that, "while the 2009 Mineral Policy mentions gender as a crosscutting issue and the 2015 National Energy Policy has a specific section on gender mainstreaming, the 2014 Local Content Policy includes few gender considerations and the 2010 Mining Act does not mention gender at all" (2018, 11, citing UN Women 2016b). However, as will be demonstrated below, creating better outcomes goes well beyond revising legislation. The sections below explore what would be involved in merging LCPs and WEE in Tanzania. The article's focus in on four strategies: TVET, MSME development, direct

employment in the gas sector, and indirect employment through policies to encourage local procurement.

3. Local Content in Tanzania's Gas Industry

From the early 2000s until 2014, a commodity boom or commodity super cycle greatly increased the price of oil and gas. Amongst African policymakers, large international financial institutions and donor agencies it became quite fashionable to talk about the role of natural resources in development.[4] many African countries in particular continue to stake their future development on oil, gas, and other resources, even as the world moves toward a post-carbon future.

Research by this time was clear that revenues from new resource extraction alone was not enough to foster meaningful development. Due to the "resource curse"[5], extractive industries were having the opposite effect. Therefore, the two biggest oil producers in Africa, Angola and Nigeria, began to turn to LCPs, especially to try to create a more meaningful impact from oil and gas (Ovadia 2014; 2016c). This approach was soon adopted by a larger group of African countries with new oil and gas finds (Ovadia 2016a; Owusu and Vaaland 2016; Graham and Ovadia 2019; Hilson and Ovadia 2020; Maponga & Musa 2021), including Tanzania (Hansen et al. 2016; Lange and Kinyondo 2016; Ovadia 2017).

LCPs are a set of policies to increase the utilization of national human and material resources in the petroleum sector and to domicile in-country oil and gas-related economic activity that was previously located abroad (Ovadia 2014). They promote indigenous participation in economies otherwise geared

[4] See for example AU, 2009; UNDP 2012; APP, 2013; UNECA, 2013; 2014 and many more.
[5] See Ovadia (2020) for a review of this concept.

for the export of raw materials. They also encourage the development of local manufacturing and service provision through backward, forward, and sideways linkages along the petroleum value chain.

Tanzania's approach to local content in the gas sector has evolved since the government produced a draft local content policy in 2014. Initially there were few concrete or "hard" regulations. Instead, there was a more "soft" or voluntary approach (Ovadia 2016a, 27-28). Although the Petroleum Act of 2015 as well as the provisions of the Production Sharing Agreements contained some more concrete requirements, the government's approach really only changed after 2016 with the publication of The Petroleum (Local Content) Regulations of 2017, which set out minimum local content targets for employment of Tanzanians as well as for the use of Tanzanian goods and services (although the definitions of local company and local goods and services as well as the power granted to the Minister of Energy and Minerals to grant exemptions weaken their impact) (Scurfield et al. 2017, 7).

Direct employment (discussed below) is often the seen as the primary benefit of a new industry. More so than in mining, oil and gas extraction has very low direct employment. Exploration and production of oil and gas, referred to as the "upstream" oil and gas industry, is extremely complex – especially offshore – and highly capital intensive. While there are few direct jobs and those that are created are highly specialized, these industries involve a large number of services and inputs. Some of these services are specific to the industry while others may also have non-oil applications (financial services, telecommunications, logistics, transportation, catering, security, manufacturing and fabrication of pipelines, and other structures). Fabrication services can be used in non-oil activities and the ability to drill wells and fabricate pipes can be used in water and sanitation. There are also many inputs such as steel, concrete, paint, etc. and equipment (spare parts, gaskets, etc). Nevertheless, there may be some

scope for job role localization (Pegram et al. 2020), and therefore gender should be considered in any localization efforts.

In a recent study, the World Bank (2016) explored how Tanzania could facilitate greater local benefit in extractive value chains through greater local procurement in just one project – the building of a liquid natural gas (LNG) processing plant in Tanzania. The "base case" estimates for local procurement from what is projected to be an investment of around US$17 billion[6] is 11 percent, or around US $1.4 billion, split between supporting services (10%), construction (70%), and project-specific industries (20%). However, the employment potential, and especially the possibility of creating low-skilled and semi-skilled jobs would be highest in the supporting services. Additionally, between 7,000-12,000 direct full-time jobs and 15,000-20,000 indirect jobs (jobs created along the value chains in agriculture, input manufacturing, etc.) could be created by such an investment, along with 40,000-55,000 induced jobs (jobs created by increased household spending) (World Bank 2016, 12-16, 27).

Recognizing that oil and gas is never going to be a significant direct employer, successful LCPs encourage linkages to the service sector and beyond. This can also help diversify economies that are dependent on extraction and help prepare for a sustainable energy transition in a post-carbon future. Overall, LCPs offer opportunities for local firms to grow and develop comparative advantage over time in areas of economic activity that have non-oil applications as well. For this reason, LCPs overlap with economic empowerment policies, as implemented in many countries in southern Africa, including Tanzania.

4. Local Content and Economic Empowerment in Tanzania

[6] In their report, the World Bank team acknowledges that the US$17billion figure is solely for the purpose of the model and actual investment will depend on the final design and construction approach. More recently, the government has suggested the project may be closer to US$30 billion.

Economic empowerment in Tanzania is emerged from the country's historical context of colonialism and its experience with socialist development. Its main objective is to help citizens of Tanzania have access to opportunities to participate effectively in economic activities in all sectors of the economy. Tanzania's National Economic Empowerment Act (2004), established NEEC and defines economic empowerment in a way that includes the promotion of local participation in economic activities.

NEEC has done important work on female and youth empowerment in Tanzania. The Empowerment and Facilitation Department within NEEC manages a number of programs that are designed to foster local participation in economic activities. A lot of the department's activities are in the gas producing areas of Lindi and Mtwara or areas with significant mining activities such as Mwanza and Geita (Ovadia 2016b, 27).

Toward the end of President Kikwete's administration, NEEC was given authority to regulate local content. However, NEEC's work on gender and economic empowerment was never integrated into its work on local content. The two aspects of the organization's work are largely separate because local content in oil, gas, and mining is not seen to be the same thing as economic empowerment.[7]

Other international donors work on WEE through the programmes they are running on skills development for oil and gas. In this way, they actively support and encourage opportunities for women. Both the Government of Tanzania (through the Ministry of Health, Community Development, Gender, Elders and Children as well as NEEC) and international donors (especially the Enhancing Employability through Vocational Training (EEVT), Skills for Oil and Gas Africa (SOGA), and Tanzania Local Enterprise Development (TLED) projects), are actively promoting opportunities for women. These initiatives

[7] This insight is based on my personal experience working with NEEC.

emerged because these organizations have a mandate of gender mainstreaming for all of their initiatives. Yet, when local content experts advise the government on local content regulations, they often overlook these initiatives and rarely mention the gender dimension. As a result, in creating the legal framework for local content, Tanzania largely missed out on the opportunity to bring in a gender dimension to LCPs.

Since local content and economic empowerment overlap considerably, it would be helpful if LCPs considered economic empowerment in general and WEE in particular to maximize the potential developmental impact of the policies and of resource extraction overall. Noting that men tend to benefit more than women from oil and gas industries, a 2017 report from the African Natural Resources Centre (ANRC) of the African Development Bank on WEE argues;

> … there are many potential benefits in promoting women's economic empowerment within O&G industries, such as more inclusive development, improved welfare for families, greater diversity and productivity, better corporate images of firms as gender champions, as well as more wealth and jobs staying in the host country (ANRC 2017, 7)

They further argue that there is a gender bias in the distribution of risks and benefits within the sector that suggests the need for policies that address gender inequality through the economic empowerment of women (ANRC 2017, 7). Their argument is to give women more opportunities to participate in the sector through job creation. However, increasing the local participation, or local content, of women involves not just encouraging direct employment, but a comprehensive and "hard" approach to local content and economic empowerment involving quotas and targets for women's participation in the sector.

Such an approach is not without precedent. Tanzania already pursues a "hard" approach to local content overall. Additionally, as Daley et al. (2018) note, mandatory female representation and quotas for female representation are already in place in Tanzania. These provisions include requiring that 30 percent of all seats in Parliament must be held by women, that at least three of the seven members of each Village Land Council shall be women, that land adjudication committees should include at least four female members out of nine, and that at least 25 percent of seats on village councils be held by women (Daly et al. 2018, 11). While in practice meeting these targets is currently a challenge in many village institutions, the precedent exists for this approach to WEE.

As the experience with unmet quotas on village councils suggests, mandatory targets require a broader set of conditions to be in place that allow the targets to be met. This is where TVET comes in. As Fox argues, "When females have equal access to education and training, *they can compete for higher-productivity jobs and enhance the pool of skilled labour available*" (Fox 2016, 13 emphasis in original).

The World Bank study mentioned above on local content in a proposed Tanzanian LNG plant describes the opportunity that would exist with such an investment. While noting the potential for job creation, they too argue, "these positive spillovers will not happen automatically. Broad skills development efforts will be needed before Tanzanians can capture all the opportunities emerging along the value chains related to the gas industry" (World Bank 2016, 27).

Job creation in the Tanzanian gas sector requires not only TVET to empower women to compete for direct employment, but also skills development and effective supplier development programs. According to United Nations Economic Commission for Africa (UNECA), such programs, "further entrench the participation of micro, small and medium-sized enterprises along the value chains"

and allow for to non-resource sectors to promote further industrial growth and technological advancements in other sectors (UNECA 2020, 53, citing SADC 2019, 60).

Specific policies are also needed to ensure, as the ANRC puts it,

> … that women benefit equally from compensation, community programs and royalties (social investments) from these industries; promoting women's direct, waged employment in the [oil and gas] sector; encouraging or mandating suppliers and subcontractors to employ women (indirect employment); and also enabling women entrepreneurs to gain access to [oil and gas] industries as suppliers and subcontractors. A prerequisite for all these measures is to enable women and girls' equal access to education, including STEM subjects, skills training and capacity development, along with their male counterparts (ANRC 2017, 7)

According to the ANRC, these policies may take the form of and mandatory requirements for employers and subcontractors to employ both women and women-owned firms and incentives for such initiatives. The promotion of procurement from women-owned or women-led firms is another important aspect of approaching value chains from a gender perspective (ANRC 2017, 8). Such an approach suggests the possibility of targets and incentives being written into local content legislation and regulations, as will be discussed further below.

4.1 Technical and Vocational Education and Training (TVET)

In order for all Tanzanians, but especially for women, to gain employment in the emerging gas sector and beyond, TVET initiatives need to be geared toward to skill requirements of this industry. According to Joseph and Leyaro, "TVET training significantly improves males as well as females chances of entering into formal employment while at the same reduces their probability of working in informal, agriculture

or being unemployed" (2019, 1). Although TVET increases the earnings of males and females, the effects of TVET are much higher for females relatively to males almost for all categories of education and training. Therefore, they argue that because the returns from investments in TVET are substantially higher, skills training and education can help "address the problem of rising inequality and by extension the higher level of poverty rate in the country" (Joseph and Leyaro 2019, 1).

It is worth noting that TVET was historically thought of as education for the purposes of work. In colonial Namibia, Ashipala has argued that a policy of vocational education was initially advanced by the German colonial administration in order to solidify German domination and the idea that natives of the country are servants whose virtue is understood in terms of their capacity to work for the colonial economy (Ashipala 2020, 2, citing Zollman 2020). However, this insight does not diminish the need for investments in TVET, aligning the training offered with the needs of emergent industries, and targeting training programs at groups that have been historically disadvantaged by these industries. Such an approach would also be in line with Tanzania's National Strategy for Gender Development (NSGD) and various other national policies and strategies for promoting gender equality (Joseph and Leyaro 2019, 8).

Figure 1. TVET Disciplines Required for the Gas Sector

Metal Works	Steel workers, pipe welders, pipe fitters and metal sheet workers
Building Works	Masons, brick workers, carpenters/joiners, painters and scaffolders
Civil Engineering &Infrastructure	Asphalt/concrete workers, and heavy equipment operators
Mechanical Works	Mechanic/heavy equipment repair workers
Electrical works	Electricians

Source: VSO 2014

Probably the most well-known and successful initiative on skills development for the Tanzanian gas industry is the Enhancing Employability through Vocational Training (EEVT) program, a partnership between Voluntary Service Overseas (VSO), the Vocational Education and Training Authority of Tanzania (VETA) and the Tanzania LNG partners (BG and Statoil). Phase I of the project was implemented from June 2012 to December 2015. It allowed the VETA programs in Lindi and Mtwara to introduce training in English language, entrepreneurship and employability skills, as well as raise standards for craftsmanship skills in line with internationally recognized levels (IVQ 1 and 2) in six trades: food preparation, plumbing, welding, carpentry, motor vehicle, and electrical installation (Ovadia 2016b, 51). Unfortunately, more work is needed to bring a gender dimension into many TVET initiatives—especially those involving the oil and gas sector given the prevalent biases that produce a highly gendered division of labour.

Figure 2. Skills Needs and Gaps for the Emerging Petroleum Sector

	Professional Level	Technical Level
Skills Needs	• BSc level education established suffices in providing for the need • MSc and MA education plans in geo-sciences and petroleum engineering at UDSM should continue. It is the best place to offer such education • Quality of education and teaching needs to be ensured • In law, economics, finance and related sciences, additional specific courses, not degrees on oil and gas may suffice • With realisation of downstream and midstream activities, a separate MA/MSc in economics related to such themes is needed	• Government needs to strengthen focus on TVET education • Existing training in key oil and gas skills in VETA Mtwara and VETA Lindi could be further extended • Need to ensure that skills are transferrable to other sectors • Apprenticeship systems should be reinforced to ensure more practical training.
Skills Gaps	• Urgent need for petroleum engineers for both government and industry • If existing & future education plans are realised and quality/capacity is ensured, gap might be covered at BSc level	• Numbers: more skilled labour with vocational education and training and technical training needed than those with professional skills (university degrees) in numbers.

	• MSc/MA level education in petroleum engineering, petroleum geology and petroleum chemistry and additional top-up courses in business, finance, law are planned at University of Dar Es Salaam (UDSM) • Based on the assessment of the quality, UDSM seems to be best equipped to provide MSc level education in petroleum sciences • There is no need for additional MSc courses in other universities. • The education provided and planned mostly cater for upstream activities and not downstream and midstream activities	• Employment numbers likely to vary with numerous factors (e.g., how installations are being built, whether there are pre-fabricated modules, where the site is, etc)

Source: Hellevik et al. 2013

The skills required for the gas sector, described in Figure 1, are largely seen to be masculine skills. While there has been significant progress, often led by international oil companies, in identifying skills gaps in oil and gas, these same companies have ignored the gap in gender opportunities. Figure 2 is taken from a report prepared for the Norwegian Agency for Development Cooperation (Hellevik et al. 2013). The figure shows the skills needs and gaps at both the professional and technical level. Although the study does suggest the need to "identify job opportunities related to improving the gender balance in all types of jobs," this work was not done in this report or in subsequent research on skills gaps (BG 2013; VSO 2014; VETA 2016). This is particularly problematic given that the 2014 ILFS survey demonstrated that men are overrepresented at every level of educational attainment (Table 1) and in Senior and Middle Management (Table 2).

Table 1: Population 15+ by Educational Attainment, Tanzania Mainland (2014)

	% Male	% Female	Total
Never attended	11.3	22.3	17.0
Primary	63.7	59.0	61.3
Secondary	17.4	14.1	15.7
Vocational training	3.8	2.2	3.0

Tertiary non-university	2.0	1.5	1.8
University	1.9	0.8	1.3

Source: URT 2014

The already-existing gap in opportunities for women at advanced levels of educational attainment is made worse because most TVET institutions in Tanzania were established to provide training to men and boys, with few facilities that can accommodate women and girls (Joseph and Leyaro 2019, 8-9). While this structural difficulty is being slowly addressed, it is an added barrier to women's participation in the oil and gas sector beyond the fact that the skills needed by the gas industry are traditionally masculine and male-dominated. Overcoming these barriers will require specific and targeted interventions by the government and the private sector. Given that Article 12 of the Petroleum (Local Content) Regulations of 2017 already requires an employment and training subplan, the next logical and necessary step is to require this plan to specify the employment and training opportunities that will be provided to men and women.

Table 2: Percentage of Employed Persons 15+ in Senior and Middle Management, Tanzania Mainland (2014)

	% Male	% Female	Total
Legislators and Administrators	82.3	83.0	82.6
Company Directors and Corporate Managers	17.7	17.0	17.4

Source: URT 2014

4.2 Development of Micro, Small and Medium-Sized Enterprises (MSMEs)

As discussed above, providing training and skills is only the first aspect of increasing local participation in the oil and gas industry. Encouraging the development of MSMEs is a necessary second aspect of local participation. As with TVET, there are numerous opportunities to promote gender equality as a mechanism for enhancing the developmental impact of the extractive industries by encouraging

women-led MSMEs. This process should involve the oil and gas industry directly and build alliances between various stakeholders to avoid offering training that is too general or not appropriate for the sector (Ablo 2019; Ayanoore 2021).

Unlike in skills development, when it comes to MSME development, donors have already emphasized promoting opportunities for women through initiatives such as the Tanzania Local Enterprise Development (TLED) project. Through TLED, VSO is involved in both skills development and small business support for local companies in oil, gas, and mining. The five-year program launched in 2016 aims to support MSMEs and their employees, enhance confidence of female entrepreneurs, and increase access to new markets by providing small loans and linking them to foreign investors. One of its major hubs is in the oil and gas regions of Lindi and Mtwara. The project specifically aims to support women in their ability to develop their businesses and also seeks to strengthen existing institutions to offer gender sensitive support to MSMEs. It aims for 40 percent of the MSMEs it works with to be women-led (Ovadia 2016b, 51-53).

While TLED is an excellent initiative from a WEE perspective, government officials in oil, gas, and mining with responsibility for local content do not typically see initiatives like this as local content (and even NEEC, which is a partner in the project does not see it as related to local content development). Views on this issue are slowly shifting in some policy circles. For example, in their report on WEE, the ANRC wrote that “Local content policies provide an important entry point for promoting women’s economic empowerment in the [oil and gas] industry” (ANRC 2017, 7) and that “The local content policy should identify specific entry points for SME engagement, including those sectors where women-owned firms are often found (hospitality services and retail trade). Local procurement practices of [oil and gas]

companies can be utilized to create linkages between SMEs – including those owned by women - and the industry" (ANRC 2017, 20).

It is important to note that while the term "small- and medium-sized enterprises" (SMEs) is more common, in Tanzania, MSMEs is more precise because these categories are used and defined by the Ministry of Industry and Trade (Figure 3). MSMEs in Tanzania are involved in non-farm economic activities - mainly manufacturing, mining, commerce and services. The commonly used measures in all definitions are number of employees, capital invested, total assets, sales volume and production capability (Anderson 2017, 3). Underscoring the economic importance of MSMEs, Anderson finds that in Tanzania, MSMEs employ "between 3 and 4 million people, accounting for 20 to 30 percent of the total labour force and contributing between 35 and 45 percent of the country's gross domestic product" (2017, 2 citing Anderson 2011). After the government conducted a nationally representative firm-level survey of MSMEs, Diao et al. were able to estimate that the value-added of all MSMEs accounted for 32.4 percent of national private non-agricultural GDP in 2010 (Diao et al. 2018, 401)

Figure 3: Categories of SMEs in Tanzania

	Number of Employees	Capital Investment (TShs)
Micro enterprise	1-4	Up to 5 million
Small enterprise	5-49	5 to 200 million
Medium enterprise	50-99	200 to 800 million
Large enterprise	100+	Over 800 million

Source: URT Ministry of Industry and Trade (2003), cited in Anderson 2017

According to Esteves (2011), the management approach of oil, gas, and mining companies should by examined to ensure these companies provide a significant opportunity to stimulate the participation of women in local economies. This can be done by integrating MSMEs with female ownership and

employment into the corporate supply chain and by building the capacity of these MSMEs to become competitive (Esteves 2011, 136). She goes farther than this by arguing that “genderless approaches to SME development will ignore the complexities that underlie exchanges between women and men” (Esteves 2011, citing Srinivasan and Mehta 2003).

International firms are important partners in getting more MSMEs and more women-led MSMEs involved in the emerging gas sector. In surveying 150 MSMEs in Dar es Salaam, Anderson found that the most important factors affecting the start-up and growth of SMEs in Tanzania were the business environment (political, legal and regulatory environment as well as socio-economic environment), institutional support (resources and finance, management and know-how, and appropriate infrastructure & technology), and individual attributes and knowledge. 88 percent of the businesses she surveyed were sole proprietorships, 82 percent had 1-4 employees, and 75 percent had under 5 million TShs of startup capital (Anderson 2017, 9-10). Only four percent of her respondents had a vocational education background, which suggests that TVET on its own is insufficient for promoting WEE. Although access to capital is a major challenge for MSMEs, other factors impacting their success include poor infrastructure, high rents, and access to relevant knowledge (entrepreneurship skills, managerial skills and leadership) (Anderson 2017, 12-18).

Access to capital is of course a major concern, especially when it comes to the participation of local businesses in the capital-intensive oil and gas sectors. The gap in opportunities is even greater for women-owned SMEs that generally have fewer resources. Perks and Schulz note that “Access to finance is a major barrier that inhibits women's involvement in company supply chains. Many women-led, community-based SMEs trying to enter supply chains are typically low-profit investments with limited

assets and capital, which makes it difficult for them to obtain finance. It also makes them high-risk and vulnerable to market variability" (2020, 381).

While access to capital is a major factor, there is much more than needs to be done to support MSMEs. According to the ANRC, international firms working in these sectors can create more equal opportunities with "procurement systems that mandate or provide incentives for suppliers to engage local women-owned enterprises; offering specific training and credit programs for small local firms, including women-owned firms; and foreign O&G companies paying a social tax or providing direct funds to local development projects to benefit women as well" (ANRC 2017, 8). Further, companies can identify opportunities for women-owned SMEs at different stages of the petroleum value chain by mapping the skills and resources in the affected communities; mapping the needs of local MSMEs; mapping possible contract management and tendering training programs that are also available for women; looking at other capacity building efforts for local women, men and youth; assessing access to information for women-owned SMEs; assessing access to credit; "unbundling" tenders to smaller lots; and determining whether possible community compensation or royalty funds also cater to the needs of women (ANRC 2017, 8).

Formalization of MSMEs also involves overcoming significant socio-cultural factors that tend to influence the performance of MSMEs. This is another reason targeted initiatives for women are required. Such factors include the level of education possessed by women-led MSMEs, their family roles, freedom of mobility, access to business information, the presence of role models for women-led MSMEs, and societal attitudes around financial control and access to credit (Nkwabi and Mboya 2019, 73-74). Unfortunately, women-led MSMEs are particularly limited by socio-cultural factors affecting financial performance. Inadequate level of education and training in business aspects, limited access to business

information, interference from husbands in control of business funds and unsupportive efforts from husbands are all factors women-led MSMEs face. Therefore, a study by ILO (2014) in Tanzania revealed that a key barrier facing women in establishing and managing enterprises is the cultural environment, which encompasses traditional reproductive roles, relations of power and gender associated impediments such as lack of collateral and inequality in inheritance between women and men (Nkwabi and Mboya 2019, 75 citing Majenga and Mashenene 2014 and ILO 2014).

Isaga (2018) surveyed 400 female entrepreneurs and did in-depth interviews with 20 in order to conclude that the most serious problems faced by female entrepreneurs are lack of access to finance, gender-related problems and social and cultural commitments. She argues that "Collective efforts from the government, public and private institutions and NGOs are needed to eliminate the challenges, especially gender-related problems" (Isaga 2018, 114). Some of these problems include being subjected to pressure to offer sexual favors to corrupt government officials, a lack of property rights over assets which could be pledged as collateral, a lack of confidence in women by bank officers, discouragement from men when starting or formalizing a businesses, and inadequate management cover during maternity leave.

It is perhaps due to these added challenges that UNECA argues, "In developing [local content] legislation, national representative bodies of micro, small and medium-sized enterprises should mobilize domestic and regional policymakers to go further by including targets for procuring a percentage of those inputs from local micro, small and medium-sized enterprises" (2020, 51), and that ANRC argues that governments and oil and gas companies should "consider procurement provisions and policies to support SMEs, local businesses and women-owned firms" (2017, 24). Such policies are necessary to aspects of merging LCPs and WEE. However, LCPs themselves can still be

strengthened with gender-sensitive provisions in the areas of employment and procurement targets for oil and gas companies.

4.3 Targets for Direct Employment

While oil and gas is never going to be a sector that employs large numbers of workers, it is an important source of highly valued employment. Tanzania's local content laws and regulations are designed to encourage and require the employment of citizens in the industry. The First Schedule to the Petroleum (Local Content) Regulations requires a minimum of 25 percent of management, 40 percent of supervisors, 80 percent of semi-skilled, and 100 percent of unskilled workers in the industry to be Tanzanians within 10 years. However, the regulations do not contain any provisions to specifically encourage or require women's employment in oil and gas.

Table 3. Employment in Tanzania's Oil and Gas Industry

	Male	%	Female	%	Total
Professional staff (1st degree or equivalent and above)	415	74.8%	144	26.0%	555
Technical (Diploma/FTC or equivalent)	183	79.6%	47	20.4%	230
Vocational (Level I, II, III)	165	90.2%	18	9.8%	183
Others – none of above	236	88.7%	30	11.3%	266
Total	999	81.0%	235	19.0%	1234

Source*:* VETA 2016

As shown in Table 3, less than 20 percent of jobs in Tanzania's oil and gas industry are held by women and less than 10 percent of jobs requiring vocational training are held by women. This inequality is harmful to the country's development given the positive developmental outcomes associated with WEE in the oil and gas sector (ANRC 2017, 15). Greater gender equality in education and employment stimulates long-term per capita growth and can generate broad productivity gains. Additionally, it can lead to other positive development outcomes such as a higher rates of family savings, greater spending

on family nutrition, health, and education, and decreases in household poverty (Perks and Schulz 2020, 380).

It is common for jobs in oil, gas, and mining to be gender-segregated. However, the divide deepens the gender gap in earnings (Perks and Schulz 2020, 381). If this gap can be narrowed and the proportion of women employed in the industry can rise, new employment opportunities can challenge existing patriarchal structures, leading to broader developmental outcomes arising from the increased power women that accompanies increased income for women (Bradshaw et al. 2017, 445).

As Eftimie et al note, “Simply creating jobs for women is necessary but not sufficient” because “issues can arise where women are hired.” They go on to say:

> Where companies have responded to concerns about not hiring women, explicit focus on hiring women can create tensions in families and communities where this contradicts cultural and social norms, particularly if men are less able to get employment as a result of these programs. Where women are successful in obtaining EI-related employment, they frequently make lower wages, may not be granted maternity leave or may lose their jobs for becoming pregnant. In some cases they have no separate toilet or washing facilities, are often not provided with suitable equipment or work clothing (for instance, one-piece men’s overalls are highly impractical for women), and women are the often first to be retrenched when mines close, or are mechanized. Heavily male cultures in many mines create work conditions threatening or uncomfortable for women workers, and many women report sexual harassment or abuse in mines. Unfortunately, in many instances where job security is low, and women fear losing their jobs, official complaints are rarely lodged, or are made only after employment has terminated

> and there is little recourse. Such environments reinforce the idea of [the extractive industries] as a male sphere, further marginalizing potential female employees (Eftimie et al. 2009, 13).

Lauwo notes that gender inequality in Tanzania's extractive industries, especially in technical, professional, and managerial positions, often stems from broader inequalities in education due to the "lack of women's representation in departments such as geology, mining, plant processing, metallurgy and engineering" (2018, 695).

There are numerous obstacles that need to be addressed beyond just setting targets for the direct employment of women. The ANRC notes that "Apart from lack of education, there might be other factors preventing women from seeking work in [oil and gas] industries. The fact that [oil and gas] industries are perceived as male-dominated can prevent even qualified women from applying for jobs. Distant and offshore locations of [oil and gas] fields as well as family responsibilities and lack of appropriate childcare facilities could prevent women with small children and families from seeking employment in the sector" (2017, 22). Another obstacle is the lack of essential workplace policies in areas such as childcare, maternity leave, flexible rotations and work schedules and sexual harassment (Perks and Schulz 2020, 381). However, without a concerted effort to both address obstacles and include targets for direct employment of women in oil and gas, change is unlikely to occur. Since many of the entrepreneurs that go on to start businesses that supply goods and services to the petroleum sector have work experience in that sector, gender inequality in direct employment can also have knock-on effects on indirect employment as well.

4.4 Encouraging Procurement from Women-Led Businesses

The core of local content promotion is encouraging more local companies to participate in supply chains for the extractive industries. Tanzania's local content regulations set out targets for local participation in engineering services, fabrication and construction services, materials and procurement, well drilling services, research and development, exploration and seismic services, transportation services, health, safety and environment services, information technology and communication services, and marine operations and logistics. Once again however, there are no targets for women's participation in the procurement of goods and services.

When it comes to the legal regime for petroleum, there is precedent for increasing women's participation in procurement in Tanzania's Public Procurement Act, which was amended in 2016 to require procuring entities to select procurement methods that achieve certain social objectives, including setting a specific percentage of procurement from special groups including women, youth, elderly, and persons with disabilities. However, the language is weak and difficult to operationalize in its current form (URT, 2016). There is an ongoing movement to specify in the Procurement Act that 30 percent of all contracts be given to women-led companies (Ovadia 2016b, 70). Such an approach could also be employed in the country's local content regulations in order to encourage WEE.

Further, the 2016 amendments to the Public Procurement Act require unbundling of works to enable higher levels of local participation in the bid. The Public Procurement Regulatory Authority (PPRA) is granted wide powers to carry out investigations, request relevant information and documents, call witnesses, and enforce the Act with stiff penalties. Such an approach can encourage local SMEs, which are often excluded from procurement processes due to the large scale of contracts, inaccessible procurement systems and complex technology, safety, labour and reporting requirements. As Esteves

notes, in addition to these challenges, women entrepreneurs face additional restrictions that can be partially addressed through unbundling of contracts (2011, 133-135).

Calignano and Vaaland have identified five ways in which international oil companies hamper indigenous firms. These include “bundling” a number of smaller contracts into larger ones, “cash traps” in which long credit lines and payment procedures disincentivize undercapitalized local firms, making tender and development plans public at a late stage (creating information asymmetry), using non-critical pre-qualification criteria that exclude local firms, and moving to engineering, procurement and construction contracts that require large firms to take on increased risk and reduce the level of industry engagement at the local level (2018, 105). In addition to unbundling, countering these trends requires setting up specialized units within firms to work with local companies. This is an approach many firms have already taken. However, in order to apply principles of gender equality vertically across the spectrum of business activities, such a department would need to have a specialization in gender equity issues, while applying principles of gender equality horizontally would require the application of a “gender lens” to every aspect of an organisation’s work (Lahiri-Dutt 2011, 7).

Lahiri-Dutt was not speaking specifically about procurement when making her observations about vertical and horizontal integration of gender equality, however these notions fit the model of how firms are moving to address the participation of indigenous companies in Tanzania through specialized units. Applying a “gender lens” here and elsewhere can produce additional positive outcomes. The IFC notes that, “According to recent research, companies that prioritize supplier diversity by taking steps such as increasing the number of women-owned and -operated businesses in the supply chain have a 133 percent greater return on procurement investments. Such businesses also spend 20 percent less on buying operations” (IFC 2018, 16, citing Connaughton & Gibbons 2016). Furthermore, women-led

businesses in the supply chain "result in stronger and larger supplier networks that contribute to higher input quality and more competitive prices over time" (IFC 2018, 8, citing IFC 2015).

Identifying women-led businesses is a challenge given that they are often small and there are limited numbers of these enterprises. This is one reason why specialized staff may be needed to bring more women-led firms into oil and gas supply chains. The IFC recommends that companies develop a Code of Conduct for Increasing Engagement with Women-Owned Businesses with a clear protocol and clear set of guidelines for increasing engagement with women-owned businesses, programs to support their integration into supply chains, and monitoring and evaluation mechanisms to ensure progress is being made (2018, 17). Given the large amount of expenditure in the sector, as discussed above with reference to the World Bank (2016) study on a proposed LNG plant, encouraging procurement from local women-led companies is perhaps the most significant action that can be taken to promote gender equality in extractives. Taken together, the actions of companies and government regulators can have a major impact, not only on gender equality in procurement, but on gender equality in Tanzania.

5. Conclusion

Company initiatives alone are not sufficient without the "hard" policies to stimulate action. A holistic approach to local content and gender equality requires all stakeholders working together with concrete targets and requirements. When it comes to procurement, the ANRC recommends that "Both local and foreign large contractor or suppliers to [oil and gas] industries can be encouraged to employ more women by including workforce diversity as a mandatory precondition for bidding or by rewarding it in tender evaluations" (2017, 24).

Perks and Schulz suggest that the gender opportunity gap requires both affirmative action policies and gender quotas to increase women's participation in the sector. In Tanzania, the Mining Act (2010) requires that at least one third of members of the Mining Advisory Board are women. Thus, there is precedent for Tanzania to replicate across the extractive industries policies that have been successful elsewhere. For example, Perks and Schulz note, the 2002 South African Mining Charter included a 10 percent quota for women in the mine workforce by 2009. They conclude “The policy has proven successful, with South Africa now boasting some of the highest rates of female participation in mining in the world” (Perks and Schulz 2020, 387).

By merging local content and women’s economic empowerment to target TVET, MSME development, direct employment, and procurement by women-led companies, local content in the Tanzanian gas sector can make significant strides toward greater gender equality. Targets for women in skills training, enterprise development, direct employment, and procurement by women-led firms have precedents not only in local content policy more broadly, but in many other interventions already in existence in Tanzania and around the world.

Local content policy in Tanzania has been implemented in a way that is disconnected from already-existing programs and policies to promote women’s economic empowerment through participation in the extractive industries. Given the already-existing inequalities in the oil and gas industry, women are excluded from the benefits of the industry and bear an unfair burden of vulnerability to the negative impacts of its activities. A new, holistic approach that brings local content and women’s economic empowerment together offers Tanzania’s gas sector the most viable pathway to petro-development in the years ahead.

REFERENCES

Ablo, A.D. (2020). Enterprise development? Local content, corporate social responsibility and disjunctive linkages in Ghana's oil and gas industry, *The Extractive Industries and Society*, 7(2), 321-327.

African Union (AU). 2009. Africa Mining Vision. Addis Ababa: African Union.

African Natural Resources Centre (ANRC). 2017. Women's economic empowerment in oil and gas industries in Africa. Abidjan: African Development Bank.

Anderson, W. (2017). Factors Affecting Small & Medium Enterprises (SMEs) Start-up and Growth in Tanzania. *The Pan-African Journal of Business Management*, 1(1), 1-26.

Andrews, N & Enns, C. (2020). The Question of Gender and Human Security in Africa's Extractive Industries. In T. Falola and S.O. Oloruntoba (eds.), *Palgrave Handbook of African Political Economy*: 667-678. Cham, Switzerland: Palgrave MacMillan.

Africa Progress Panel (APP). 2013. Equity in extractives: stewarding Africa's natural resources for all. Africa Progress Report 2013. Geneva.

Ashipala, S.N. (2020). Technical and Vocational Education and the Place of Indigenous Labour in the Mining Industry of Namibia, 1970–1990, *Journal of Southern African Studies*, 47(1), 127-142.

Ayanoore, I. (2021). The factors eroding enterprise development in Ghana's oil and gas sector: A critical reflection on why the enterprise development centre failed, *The Extractive Industries and Society*, 8(3).

BG Tanzania. (2013). Concept Note: Energy Sector-related Capacity Building Programme. August 2013.

Bradshaw, S., Linneker, B., & Overton, L. (2017). Extractive industries as sites of supernormal profits and supernormal patriarchy? *Gender & Development*, 25(3), 439-454.

Calignano, G. & Vaaland, T.I. (2018). Local Content in Tanzania: Are Local Suppliers Motivated to Improve? *The Extractive Industries and Society*, 5, 104-113.

Daley, E., Lanz, K., Mhinda, A., Driscoll, Z., Ndakaru, J., Grabham, J., Kereri, E., & Mbise, E. (2018). Gender, Land and Mining in Pastoralist Tanzania. WOLTS Research Report No.2. Mokoro Ltd & HakiMadini.

Diao, X., Kweka, J., & McMillan, M. (2018). Small firms, structural change and labor productivity growth in Africa: Evidence from Tanzania, *World Development*, 105, 400-415.

Eftimi, A., Heller, K., & Strongman, J. (2009). Gender Dimensions of the Extractive Industries: Mining for Equity. Extractive Industries and Development Series #8. Washington DC: The World Bank.

Esteves, A.M. (2011). Women-Owned SMEs in Supply Chains of the Corporate Resources Sector. In K. Lahiri-Dutt (ed.), *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*: 133-143. Canberra: ANU Press.

Fisher, E. (2007). Occupying the Margins: Labour Integration and Social Exclusion in Artisanal Mining in Tanzania. *Development and Change,* 38(4), 735–760.

Fox, L. (2016). Gender, Economic Transformation and Women's Economic Empowerment in Tanzania. London: Overseas Development Institute.

Graham, E. and Ovadia, J.S. (2019). Oil exploration and production in Sub-Saharan Africa, 1990-present: Trends and developments, *The Extractive Industries and Society*, 6(2), 593-609.

Hansen, M.W., Buur, L., Kjær, A.M., and Therkildsen, O. (2016). The Economics and Politics of Local Content in African Extractives: Lessons from Tanzania, Uganda and Mozambique*. Forum for Development Studies*, 43:2, 201-228.

Hellevik, S.B., Al-Kasim, F., Ngowi, P., Stokkeland, H., & Sund, K. (2013). Mapping and Analysis of the Needs for Petroleum Related Education in Tanzania. NORAD Report 16/2013. Oslo: Norwegian Agency for Development Cooperation.

Hill, C., Madden, C., and Collins, N. (2017). A Guide to Gender Impact Assessment for the Extractive Industries. Oxfam, Melbourne, Australia.

Hilson, A.E. & Ovadia, J.S. (2020). Local Content in Developing and Middle-Income Countries: Towards a More Holistic Strategy. *The Extractive Industries and Society*, 7, 253-262.

IFC. (2018). Unlocking Opportunities for Women and Business: A Toolkit of Actions and Strategies for Oil, Gas, and Mining Companies. Washington, DC: International Finance Corporation.

Isaga, N. (2018). Start-up motives and challenges facing female entrepreneurs in Tanzania, *International Journal of Gender and Entrepreneurship*, https://doi.org/10.1108/IJGE-02- 2018-0010

Joseph, C. & Leyaro, V. (2019). Gender differential effects of technical and vocational training: Empirical evidence for Tanzania. CREDIT Research Paper, No. 19/04. Nottingham: The University of Nottingham, Centre for Research in Economic Development and International Trade.

Lahiri-Dutt, K. (2011). Introduction: Gendering the Masculine Field of Mining for Sustainable Community Livelihoods. In K. Lahiri-Dutt (ed.), *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*: 1-19. Canberra: ANU Press.

Lahiri-Dutt, K. (2015). The Feminisation of Mining. *Geography Compass*, 9(9), 523-541.

Lange, S. & Kinyondo, A. (2016). Resource nationalism and local content in Tanzania: Experiences from mining and consequences for the petroleum sector. *The Extractive Industries and Society*, 3, 1095-1104.

Lange, S. & Wyndham, V. (2021) Gender, regulation, and corporate social responsibility in the extractive sector: The case of Equinor's social investments in Tanzania, *Women's Studies International Forum*, 84.

Lauwo, S. (2018). Challenging Masculinity in CSR Disclosures: Silencing of Women's Voices in Tanzania's Mining Industry, *Journal of Business Ethics*, 149, 689-706.

Maponga, O.P. & Musa, C. (2021). Domestication of the role of the mining sector in Southern Africa through local content requirements, *The Extractive Industries and Society*, 8(1), 195-210.

Nkwabi, J.M. & Mboya, L.B. (2019). A Review of Factors Affecting the Growth of Small and Medium Enterprises (SMEs) in Tanzania, *European Journal of Business and Management*, 11(33), 1-8.

Ovadia, J.S. (2014). Local content and natural resource governance: The cases of Angola and Nigeria. *The Extractive Industries and Society*, 1, 137-146.

Ovadia, J.S. (2016a). Local Content Policies and Petro-Development in Sub-Saharan Africa: A Comparative Analysis, *Resources Policy*, 49, 20–30.

Ovadia, J.S. (2016b). Local Content Situational Analysis in Tanzania in the Mining and Gas Sectors. Abidjan: African Development Bank.

Ovadia, J.S. (2016c). The Petro-Developmental State in Africa: Making Oil Work in Angola, Nigeria and the Gulf of Guinea. Hurst, London.

Ovadia, J. S. (2017). Local Content in Tanzania's Gas and Minerals Sectors: Who Regulates? Briefing. Bergen: Chr. Michelsen Institute.

Ovadia, J.S. (2020). Natural Resources and African Economies: Asset or Liability? In T. Falola and S.O. Oloruntoba (eds.), *Palgrave Handbook of African Political Economy*: 667-678. Cham, Switzerland: Palgrave MacMillan.

Ovadia, J.S., Ayelazuno, J.A., & van Alstine, J. (2020). Ghana's petroleum industry: expectations, frustrations and anger in coastal communities, *Journal of Modern African Studies*, 58(3), 397-424.

Owusu, R.A. & Vaaland, T.I. (2016). A Business Network Perspective on Local Content in Emerging African Petroleum Nations, *International Journal of Energy Sector Management*, 10(4), 594-616.

Pegram, J., Falcone, G., & Kolios, A. (2020). Job role localization in the oil and gas industry: A case study of Ghana, *The Extractive Industries and Society*, 7(2), 328-336.

Perks, R. & Schulz, K. (2020). Gender in oil, gas and mining: An overview of the global state-of-play, *The Extractive Industries and Society*, 7(2), 380-388.

Sax, M. & Tubb, D. (2021). The Buzz Phase of Resource Extraction: Liquified Natural Gas in Kitimat, British Columbia, *The Extractive Industries and Society*, 8(3).

Scott, J., Dakin, R., Heller, K., & Eftimie, A. (2013). A survey and analysis of the gendered impacts of onshore oil and gas production in three developing countries. Washington, DC: The World Bank.

Scurfield, T., Woodroffe, N., & Olan'g, S. (2017). Localizing Tanzania's Gas Sector: Determining Optimal Policies for an Emerging Producer. New York: National Resource Governance Institute.

United National Development Programme (UNDP). 2012. UNDP's Strategy for Supporting Sustainable and Equitable Management of the Extractive Sector for Human Development. New York: UNDP.

United National Economic Commission for Africa (UNECA). 2013. Making the most of Africa's commodities: industrializing for growth, jobs and economic transformation. Economic Report on Africa 2013. Addis Ababa: UNECA.

United National Economic Commission for Africa (UNECA). 2014. Dynamic industrial policy in Africa: innovative institutions effective processes and flexible mechanisms. Economic Report on Africa 2014. Addis Ababa: UNECA.

United National Economic Commission for Africa (UNECA). 2020. Strategies and policies for the integration of micro, small and medium-sized enterprises into the industrialization process in Southern Africa. Addis Ababa: UNECA.

URT. (2004). National Economic Empowerment Act. Dar es Salaam: United Republic of Tanzania.

URT. (2014). Integrated Labour Force Survey: Analytical Report. Dar es Salaam: United Republic of Tanzania.

URT. (2016). The Public Procurement (Amendment) Act. Dar es Salaam: United Republic of Tanzania.

URT. (2017). The Petroleum (Local Content) Regulations. Dar es Salaam: United Republic of Tanzania.

Vocational Education and Training Authority (VETA). (2016). Vocational Skills Needs Survey in Oil and Gas Supply Chain. Dar es Salaam: Vocational Education and Training Authority and Transport Resource Centre Limited. Draft. September, 2016.

VSO. (2014). Pathway to vocational employment in the emerging Tanzanian gas sector: A Collaborative Assessment of Vocational and Educational Training Needs. Dar es Salaam: Voluntary Service Overseas Tanzania.

World Bank. (2016). Leveraging a Large Capital Investment to Develop Local Value Chains: 'Local Content' in the Construction of Tanzania LNG Facility. Draft. Washington DC: The World Bank.

Wyndham, V. & Lange, S. (2019). Making Sense of CSOs (in)action in Tanzania's petroleum sector: Where is gender? In O. Fjeldstad, D. Mmari, & K. Dupuy (eds.). *Governing Petroleum Resources: Prospects and Challenges for Tanzania*: 128-131. Bergen: Chr. Michelsen Institute & Dar es Salaam: REPOA.