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Local Content Policies in the Energy Transition Era in Africa: A Case Study of the East African Oil and Gas Industry

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Video interview by the author discussing this book chapter can be accessed at, https://www.youtube.com/watch?v=mAa10UGP-cM&t=726s. Last accessed on 1st September 2020.

10.1 Introduction

The extractive industry brings about massive revenues and developments for a resource-rich country. Although the world is now transitioning to a low-carbon economy, the continued role of fossil fuels in Africa’s economic development cannot be ignored.\textsuperscript{1} Energy is key in addressing

\textsuperscript{1}Nalule, V.R. “Transitioning to a low carbon economy: Is Africa ready to bid farewell to fossil fuels?” In The Palgrave handbook of managing fossil fuels and energy transitions. Palgrave Macmillan, Cham, 2020. 261–286.

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the challenges faced on the African continent, including poverty, famine, gender inequality just to mention but a few.\textsuperscript{2} Most importantly, both fossil fuels and renewables are key in achieving the United Nations’ Sustainable Energy for All and the associated Sustainable Development Goal (SDG) 7 which advocates for access to modern energy for all.\textsuperscript{3} The challenge of energy access is anticipated to escalate on the African continent basically due to growing demand for energy fuelled by urbanization, industrialization and population growth. In this respect, these countries will still rely on fossil fuels though they should be mindful of SDG 13 on climate action.\textsuperscript{4} Consequently, the issue of local content in the extractive sector in still relevant in this energy transition era as will be discussed in this chapter. However, it is imperative for African nascent oil and gas economies to note that, the discovery of their resources is during the wake of the clean energy wave and as such the foreign investors will rush into renewable energy, and this might leave stranded resources in Kenya, Uganda and Tanzania. Hence, the local content policies must be adopted not for developing capabilities in the extractive industry but also the renewable energy industry.\textsuperscript{5}

Basically, many resource-rich countries have implemented local content policies in the last decade alone, as a means of reaping full advantages of the energy industry lifecycle.\textsuperscript{6} Local content policies are found in various instruments within a legal framework of a resource-rich country. These policies are found in primary and secondary legislation as well as in negotiated instruments.\textsuperscript{7} The policy advocates for the creation of employment opportunities, capacity building

\textsuperscript{2}Nalule, V.R. \textit{Energy poverty and access challenges in sub-Saharan Africa: The role of regionalism.} Springer, 2018.

\textsuperscript{3}United Nations Sustainable Development Goals (SDG), 2015.

\textsuperscript{4}Olawuyi, D.S. “Can MENA extractive industries support the global energy transition? Current opportunities and future directions.” \textit{The Extractive Industries and Society} (2020).

\textsuperscript{5}For a full discussion on local content in the energy transition era, please watch the video featuring the author. Local Content in the East African Oil and Gas Sector in the Energy Transition Era. Link to YouTube video interview by Dr. Victoria Nalule featuring Dr. Rukonge Muhongo, \url{https://www.youtube.com/watch?v=mAa10UGP-cM&t=395s}.

\textsuperscript{6}Marcel, Valérie, et al. “A local content decision tree for emerging producers.” Chatham House, The Royal Institute of International Affairs: London, UK (2016).

\textsuperscript{7}Tordo, Silvana, et al. \textit{Local content policies in the oil and gas sector}. The World Bank, 2013.
mechanisms, value-addition, educational and training provisions for both the indigenous and local communities. Most resource-rich countries have currently adopted and implemented legal provisions on local content.

As much as resource-rich countries have implemented local content policies. It should be noted that some countries have adopted favourable and credible local content provisions. Countries such as Norway and the United Kingdom developed successful local content policies in the 1970s and 1980s that were based on value creation rather than stringent local content requirements. It was not only, Norway and the United Kingdom that implemented these policies even other countries such as Trinidad and Tobago, also adopted these policies but through value creation in the industrialization of natural gas, which was previously flared.

Local content policies have traditionally been approached in a stringent way or lenient depending on the policymaker’s intention and the nature of the socio-economic and political climate of a given country. After 2006 Brazil oil discoveries, the Country also adopted and implemented stringent local content policies associated with hefty fines for non-compliance. Nigeria was the first country in Sub-Saharan Africa to adopt local content policies. Nigeria did not emphasize value creation; neither did the government emphasize capacity building, but the indigenization of the oil and gas industry.

Emerging resource-rich countries such as Kenya, Tanzania, Mozambique and Uganda have the common goal of capturing the broader economic benefits from the extractive industry as well as bolstering industrialization and economic development of the domestic economy for the better welfare of a country’s citizens. However, the

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8Tordo, Silvana. *National oil companies and value creation*. The World Bank, 2011.
9Supra n.7 Tordo.
10Warner, Michael. *Local content in procurement: Creating local jobs and competitive domestic industries in supply chains*. Routledge, 2017.
11Ovadia, Jesse Salah. “Local content and natural resource governance: The cases of Angola and Nigeria.” *The Extractive Industries and Society* 1.2 (2014): 137–146.
12Nwapi, Chilenye. “A survey of the literature on local content policies in the oil and gas industry in East Africa.” SPP Research Paper 9/16 (2016).
ambitious goal is to develop local content policies within an economy of an emergency oil and gas producer.

Literature shows how difficult it is to obtain the probable advantages of implementing such policies.\(^{13}\) This is because emerging producers face numerous challenges in materializing the effects of an adequate, credible and exemplary local content policy. Emerging producers are uncertain of their resource base; hence they are not certain of the investment value their reserves pose.\(^{14}\) Furthermore, they lack both a skilled labour force and limited state administrative capacity. But for emerging producers, local content policies need to be adopted and implemented within the dimensions of the new era and world order.

Emerging producers are creating local content policies in the world that seeks climate change by implementing climate mitigation measures to achieve a just transition. The emerging producers face the difficulty of creating local content policies in a post-COVID-19 era, where supply chains are disrupted, procurement mechanisms are distorted. With the dwindling oil prices that have recorded an unprecedented record of a negative value price per barrel\(^{15}\); Local content policies are the least desired policy tools that could attract foreign direct investment as well as be a vehicle to further develop an economy.

This chapter is divided into eight parts, the second part of the chapter explains the oil and gas industry as an enclaved industry for domestic suppliers and workforce to integrate due to numerous factors, the third part discusses the policy design and factors that affect local content policy design in any economy be it a developing or developed economy. Furthermore, the chapter discusses the probable advantages and disadvantages of local content policies in oil and gas industries, in the fifth part, the chapter undertakes a case study analysis between Norway and Brazil being exemplary local content models for drawing lessons for emerging oil and gas producers such as Kenya, Tanzania and Uganda.

\(^{13}\)Ibid.

\(^{14}\)Andrews, Nathan, and Chilenye Nwapi. “Bringing the state back in again? The emerging developmental state in Africa’s energy sector.” Energy Research & Social Science 41 (2018): 48–58.

\(^{15}\)See “East Africa’s oil industry: A new story in the making.” https://www.busiweek.com/east-africas-oil-industry-a-new-story-in-the-making/.
Lastly, the chapter introduces the creation of a regional content policy as a novel means of adopting local content policies for developing local content policies for emerging economies such as Kenya, Tanzania and Uganda.

10.2 Breaking the Enclave in the East African Oil and Gas Industry

Small resource-rich economies such as Tanzania, Kenya and Uganda are largely dependent on the lucrative extractive industry. The foreign direct investment flowing into these small economies dominates these economies with their substantial proportion of goods, services, tools, R&D facilities, personnel and technology as well as service suppliers into the extractive industry.\textsuperscript{16} The nature of a multinational investor coming into East Africa with intact linkages does not serve the potential growth and development in other key areas of the economy such as the agricultural, manufacturing and services sector. The nature of the extractive industry inadvertently creates an enclave industry that domestic suppliers cannot integrate to develop their domestic capabilities and compete against the international market participants.\textsuperscript{17}

It should be noted that countries such as Norway and Brazil have adopted and implemented local content policies to break the enclave nature of the oil and gas industry. Developing countries such as Kenya, Tanzania and Uganda have followed suit. The main aim of implementing these policies is to create downstream value-added products in the domestic industry, to strengthen backward and forward linkages, to drive innovation and develop technological capability in the domestic workforce, to diversify the economy and to secure growth and development of the oil and gas resources.

\textsuperscript{16}Ibid.

\textsuperscript{17}Ackah-Baidoo, Abigail. “Enclave development and ‘offshore corporate social responsibility’: Implications for oil-rich sub-Saharan Africa.” \textit{Resources Policy} 37.2 (2012): 152–159.
10.2.1 Understanding Local Content Policies

It should be noted that local content policies are the main driver of development in oil and gas-rich countries if implemented properly. This has been evident in developed and mature oil and gas economies such as Norway, Brazil, Trinidad and Tobago and the United Kingdom. On the other hand, in Sub-Saharan Africa, countries like Angola and Nigeria who have implemented these policies but have not gained similar results as their counterparts of Norway and Brazil. Local content can be understood in three perspectives, namely the economic, social and political perspectives.

Local content policies found their origin from an economic school of thought, classical economists such as Grossman defined local content as ‘a given percentage of domestic value-added or domestic components are embodied in a specified final product’. Furthermore, local content has also been regarded as a policy that increases the costs of production for foreign investors. Thus, the policy involuntarily hinders foreign direct exchange from potential international players due to the increased costs. Secondly, local content is a policy that has a direct impact on the community through the objective of welfare maximization. It is a vital component within a resource-rich country’s political economy. It should be noted that local content policies emanate from deliberative political motives of policymakers, to what could be known as ‘government intervention’. The government intervention takes place through two forces, namely market and public forces as to intervene in the enclave extractive industry. The policy has been used to solicit political support through clientelism, therefore, maintaining power and destroying democracy by

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18Grossman, Gene M. “The theory of domestic content protection and content preference.” The Quarterly Journal of Economics 96.4 (1981): 583–603.
19Kolstad, Ivar, and Abel Kinyondo. “Alternatives to local content requirements in resource-rich countries.” Oxford Development Studies 45.4 (2017): 409–423.
20Nwapi, Chilenye. “Corruption vulnerabilities in local content policies in the extractive sector: An examination of the Nigerian Oil and Gas Industry Content Development Act, 2010.” Resources Policy 46 (2015): 92–96.
21Tordo, Silvana, et al. Local content policies in the oil and gas sector. The World Bank, 2013.
Countries like Nigeria, Equatorial Guinea, Angola, Venezuela, Azerbaijan and Brazil are among the few economies that leaders have used local content policies to retain power. Thirdly, local content policies are used to maximize social welfare in host communities since host communities have public goods such as roads and rudimentary infrastructure, etc. The host communities cannot gain directly from the oil and gas operations without local content policies that set mandatory targets for foreign investors to adhere to.

In this chapter, local content is defined as ‘the administrative, legislative and judicial government intervention into the extractive industry value chain to create provisions for both domestic goods and services as well as the domestic labour force’.24

Local content is implementable in three ways, the fundamental or conventional type of local content policy is the national content policy. This typology of local content policy avails provisions for the whole country. Most resource-rich countries, such as Norway, Brazil, Nigeria, Tanzania, Kenya, Uganda and Mozambique, have adopted and implemented the national content policy. The second typology is the community content policy; this typology brings about provisions for the host communities that surround the extractive industry operations. Community content policy is an affirmative action that gives preference to the neighbouring communities in the provisions for goods and services as well as the domestic labour force. Lastly, the regional content policy, this typology of local content policy has not proliferated among resource-rich countries because it raises numerous questions of sovereignty over

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22 Ovadia, Jesse Salah. “The making of oil-backed indigenous capitalism in Nigeria.” New Political Economy 18.2 (2013): 258–283.
23 Warner, Michael. “Community content: The interface of community investment programs with local content practices in the oil and gas development sector.” Overseas Development Institute (ODI) Briefing Note 9 (2007).
24 Authors personal development.
25 Nwapi, Chilenye. “A survey of the literature on local content policies in the oil and gas industry in East Africa.” SPP Research Paper 9/16 (2016).
26 Warner, Michael. “Community content: The interface of community investment programs with local content practices in the oil and gas development sector.” Overseas Development Institute (ODI) Briefing Note 9 (2007).
natural resources, sharing of benefits and the costs of having a supranational regulatory body over domestic resources. 27 But a regional content policy also advocates for pooling of resources and the facilitation of having an independent regulatory body that is not captured by the politics of a particular country. Though regional content policies are yet to be implemented, they may be the answer to questions that arise due to the incremental costs of both national and community content policies, the lack of specialized skills and capital in resource-rich countries. A regional content policy creates channels of pooling resources to attain mutual benefits from the extractive industry.

10.3 Factors Affecting Local Content Design in East Africa

Kenya, Uganda and Tanzania have in the last decade experienced the Gold Rush that South Africa experienced in the twentieth century. This is due to the extractive resources that have been found in these countries. Kenya discovered 700 million barrels of oil in Turkana, Uganda discovered over 4.5 Billion barrels of crude oil in the Albertine region and Tanzania discovered over 47 trillion cubic feet worth of gas in Mtwara, the Southern region of Tanzania. Due to these resources, East Africa adopted local content policies; the policy was adopted based on different rationales. In Kenya, the local content policy emphasizes domestic ownership, while in Uganda the local content policy emphasized domestic supplier integration into the oil and gas industry and in Tanzania, the government emphasized on training the domestic and host community as part of local content development. As much as, these objectives are fundamental to the development of local content policies, different factors affect the design of local content policies depending on the nature of the prevailing circumstances of the economy. These are the following:

27Nwapi, Chilenye. “A survey of the literature on local content policies in the oil and gas industry in East Africa.” SPP Research Paper 9/16 (2016).
10.3.1 The Country’s Geology and Geography

Resource-rich countries must assess the geography and geology of their extractive resources. The different nature of the topography demands a different type of policy objective as well as expectation. For example, a country like Tanzania where most of the 42 tcf worth of gas is found offshore compared to Uganda and Kenya where their oil resources are found onshore.\(^{28}\) The different governments must ask the multinational oil companies to assess and understand what probable opportunities can be availed from the nature of the resource’s geology.\(^{29}\) Rather than implementing policies that eventually become redundant due to the impossibility of fulfilling the objectives.

Governments must obtain information from the foreign investors to provide ‘early data’ on the skills and goods and services needed. This will enable timeous preparation from the domestic suppliers and workforce. Training and costs differ due to the nature of the geology. IPIECA states that ‘geologists and specialist engineers (those trained at the tertiary-education level) are by far outnumbered by skilled and semi-skilled construction tradesmen, metal and mechanical tradesmen, electrical and electronic tradesmen and other experienced heavy industry machine and plant operator’.\(^{30}\) Such costs are associated with the nature of the resources’ geology, in frontier countries such as Mozambique, their high risks of exploration. The investors would expect lower local content quotas as compared to reserves found in countries like Nigeria and Angola due to a ready established extractive industry that hinders the costs of production.

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\(^{28}\) Roder, Kai. “‘Bulldozer politics’, state-making and (neo-)extractive industries in Tanzania’s gold mining sector.” *The Extractive Industries and Society* 6.2 (2019): 407–412.

\(^{29}\) Marcel, Valérie, et al. “A local content decision tree for emerging producers.” Chatham House, The Royal Institute of International Affairs: London, UK (2016).

\(^{30}\) Ibid.
10.3.2 Structure of the Country’s Economy

The nature of the host economy is a pivotal determinant of whether local content policies will thrive within a given resource-rich country. It should be noted that countries that do not solely depend on the extractive industry to develop and maximize social welfare for its citizens tend to gain more from the policy, than countries that are petro-states or solely dependent on the extractive sector for economic survival. This is because of the local content policy to be efficient in any economy, the economy must have the absorptive capacity to absorb the massive inflow of the foreign direct investment otherwise the lack of such an absorptive capacity can lead to the Dutch disease.

Economies such as Brazil and Norway that had thriving industries (shipping and fishing industry) pre-discovery of the oil and gas resources have developed exemplary local content policies, mainly attributed to the fact that the economies have skills and capabilities to leverage on to the oil and gas industry within their domestic economies. This made these economies ready to facilitate the interaction between the oil and gas industry and other industries such as the shipping industry that developed linkages in the whole economy. Economies such as Kenya, Uganda and Tanzania do not have the absorptive capacity to individually contain the extractive foreign direct investment. Hence the economy cannot leverage on its capacity to facilitate domestic integration into the oil and gas industry.

10.3.3 The Labour Market of the Country

The labour market of an economy determines what level local content targets should be set at. The government must readily avail of a workforce that can integrate the extractive industry and be internationally

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31 Larsen, Erling Røed. “Escaping the resource curse and the Dutch disease? When and why Norway caught up with and forged ahead of its neighbours.” *American Journal of Economics and Sociology* 65.3 (2006): 605–640.

32 Ramírez-Cendrero, Juan M., and Eszter Wirth. “Is the Norwegian model exportable to combat Dutch disease?” *Resources Policy* 48 (2016): 85–96.
The extractive industry requires specific skills such as welders, fabricators, electricians that have sophisticated skills for the extractive industry. If a country has high literacy levels as well as competencies for the extractive sector or even skills that can be leveraged by the extractive industry. Local content policies can call for a high target of national participation in the extractive industry value chain.

If the labour market of an economy has low literacy levels and a lack of a skilled workforce. The foreign investor will definitely rely on the foreign workforce to meet the demands of the extractive industry operations. The foreign company will set a budget for training the domestic workforce, but this will be based out of the goodwill of the company as the government cannot set the budget for training the domestic workforce for the company. Hence this enhances CSR rather than local content policy targets. In this case, the government will set minimal local content targets. Training provisions, in this case, should be placed by both the government and the multinational companies, as the government needs to place the right educational policies and fund technical schools and universities to offer the needed skills so as to build a domestic workforce that can integrate the extractive industry value chain. The East African economy has largely been driven by the agricultural, tourism, services and manufacturing sectors. The oil and gas sector is a nascent industry in the region; the skills and capabilities are not readily available within the domestic population. Hence local content policies must be designed accordingly to facilitate the optimal exploitation of the resources while developing domestic capability.

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33 Ngoasong, Michael Zisuh. “How international oil and gas companies respond to local content policies in petroleum-producing developing countries: A narrative inquiry.” *Energy Policy* 73 (2014): 471–479.

34 Marcel, Valérie, et al. “A local content decision tree for emerging producers.” Chatham House, The Royal Institute of International Affairs: London, UK (2016).

35 Ozigbo, Nathaniel C. “Technological capacity building in Nigeria’s oil and gas industry.” Proceeding of the 19th annual International information Management Association, San Diego, CA (2008).

36 Ramdoo, Isabelle. “Unpacking local content requirements in the extractive sector: What implications for the global trade and investment frameworks.” International Centre for Trade and Sustainable Development (ICTSD).

37 Na, Hyeseon. “Is intraregional trade an opportunity for industrial upgrading in East Africa?” *Oxford Development Studies* 47.3 (2019): 304–318.
10.3.4 International Trade Agreements

Local content design is largely affected by international agreements that a country ratifies since these agreements affect the structure and design of other policies such as industrial, procurement and fiscal policies that change the manner in which local content policies can adopt and be implemented within a resource-rich country. International agreements have also been key in discouraging the use of local content policies in resource-rich countries. International instruments such as the World Trade Organization (WTO), where the members to the WTO have ratified certain international agreements such as the agreement on Trade-Related Investment Measures (TRIMs), the General Agreement on Tariff and Trade (GATT) and the Agreement on Subsidies and Countervailing Measures (ASCM); all these international agreements place emphasis on the ‘national treatment’ principle. This principle holds every member country to treat one another as they would their own nationals. But for the least developing countries, international agreements have created some limited exceptions in the application of this principle.

Local content pioneer countries such as Norway and the United Kingdom dropped these policies after joining the European Union due to the national treatment principle. Kenya, Tanzania and Uganda have all ratified the WTO; the ASCM makes an exception for least developed countries with a GNP per capita of less than US$ 1000 to implement subsidies that do not have ‘adverse effects’ on international trade. Local content’s main mechanisms are having a deliberate preference on the domestic supplier and labour force. With countries like Kenya having a

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38Ramdoo, Isabelle. “Unpacking local content requirements in the extractive sector: What implications for the global trade and investment frameworks.” International Centre for Trade and Sustainable Development (ICTSD).

39Ibid.

40Norway—Local content lessons learned. Willy H Olsen http://www.biee.org/wpcms/wp-content/uploads/Olsen-Norway-local-content-strategy2.pdf.

41Ramdoo, Isabelle. “Local content policies in mineral-rich countries.” An Overview. Discussion Paper 193, 2016.
USD 1320 GNI per capita in 2020, this largely affects the development of local content policies in Kenya.\footnote{East Africa Economic Outlook 2019. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2019AEO/REO_2019_-_East_Africa_.pdf.}

### 10.3.5 The Volatility of Oil and Gas Prices

Oil and gas prices are known for their volatility in the international market. When the oil and gas industry experienced increased oil and gas prices in the international market as in the decade of 2005–2015, the pressure to intensify local content policies in the oil and gas-rich countries escalated due to the massive profits the multinational oil companies were making. But currently, the effects of the Corona Virus (COVID-19) pandemic have led to weathering oil and gas prices in the international market reaching less than $1 per barrel due to the effects of the wide lockdown measures to combat COVID-19 across the globe.\footnote{Albulescu, Claudiu. “Coronavirus and oil price crash.” Available at SSRN 3553452 (2020).} It is clear that after the wave of the COVID-19, multinational companies will not be in a favourable position to invest leave alone to meet their local content mandatory targets. The design of local content policies must take into account such uncertainties and be flexible in its application so as to meet the objectives of the policymaker.

### 10.4 The Advantages and Disadvantages of Local Content Policies

Local content is both disadvantageous and advantageous in its application. The policy’s efficiency and functionality are dependent on the nature of the factors that affect the local content design. In countries with unfavourable political economies and poor social welfare, poor infrastructure as well as lack of capital to integrate the extractive industry\footnote{Subai, Pereowei. Local content oil and gas law in Africa: Lessons from Nigeria and beyond. Routledge, 2019.}:
Local content policies do not thrive in such economies. The following are the advantages and disadvantages of local content policies.

10.4.1 The Advantages of Local Content Policies

Local content policies create regional clusters and pool resources: Clusters encourage the transfer of technology which results in high rates of innovation by creating competent channels to public goods and other market determinants that would have been expensive to acquire. Norway established indigenous supplier clusters that were involved in the oil and gas industry.\textsuperscript{45} These established clusters in Norway employed approximately 114,000 people in the indigenous market and sales worth $32 billion in the indigenous economy.\textsuperscript{46} Local content policies through cluster creation can reduce the expenditure margins on R&D and improve productivity.

a. Economic Diversification

Local content policies facilitate the diversification of the economy. This is possible through public-based and market-based inputs, that create development channels for other industries other than the oil and gas industry. For example, in Trinidad and Tobago the government through their local content policy chose to create incentives for inward investments and joint ventures between indigenous and foreign market participants.\textsuperscript{47} This facilitated the capital-linkage from the oil and gas industry to other industries with limited domestic competitiveness. Equally, through their 2010 Economic Transformation Plan,

\textsuperscript{45}Knop, Lilla, and Marzena Kramarz. “Attractiveness of the region in connection with inter-modal transport development.” In \textit{Sustainable logistics and production in industry 4.0}. Springer, Cham, 2020. 197–217.

\textsuperscript{46}Ibid.

\textsuperscript{47}Boopsingh, Trevor M., and Gregory McGuire, eds. \textit{From oil to gas and beyond: A review of the Trinidad and Tobago model and analysis of future challenges}. University Press of America, 2014.
Malaysia adopted local content policies in the same design, facilitating economic diversification.48

b. Provision for Social Welfare Maximization

The oil and gas industry calls for a sophisticated and highly skilled labour force. Resource-rich countries like Nigeria, Angola, Tanzania and Uganda do not have the required skills. Local content policies create mechanisms for indigenous employment. In Brazil, local content policies involved the national oil company Petrobras in skills development. Petrobras created a human resource programme through the Agencia Nacional do Petroleo in 1999.49 The programme encouraged training courses that met the demands of the oil and gas industry. Local content policies give international oil companies a social license to operate since they maximize social services within the host communities.

c. Rent-Seeking

The oil and gas industry creates a large part of a country’s GDP in resource-rich countries. These policies bring the expectation for indigenous inclusion. Hence the labour force of resource-rich countries seeks the big proceeds from the industry. Rent-seeking wastes competition for a given economic opportunity and, in this case, the opportunity is the oil and gas industry.

d. Redundancy

Hufbauer, Schott and Cimino state that ‘the effect of local content policies on trade is to discourage foreign imports and to stifle competition between domestic and foreign firms. The impact on trade of local content policies depends on the percentage of local content required and

48Rahim, Khalid Abdul, and Audrey Liwan. “Oil and gas trends and implications in Malaysia.” Energy Policy 50 (2012): 262–271.
49Mendonça, Roberto Wagner, and Luiz Guilherme de Oliveira. “Local content policy in the Brazilian oil and gas sectoral system of innovation.” Latin American Business Review 14.3–4 (2013): 271–287.
the efficiency of existing firms. In an economy with inefficient firms, a high degree of required local content thwarts competition.\(^{50}\) Local content policy avails a deliberate preference to the domestic suppliers, as some oil and gas-rich countries would emphasize on the domestic suppliers meeting international standards in terms of price, quality and delivery. Most developing countries treat the local content policy as an affirmative action that automatically integrates the domestic supplier into the oil and gas value chain.

### 10.5 The Norwegian and Nigerian Case Study: Lessons to Be Drawn for Emerging Resource-Rich Countries

The chapter has so far explained local content policies and how these policies are applicable within a resource-rich economy. For the purposes of developing a proper analysis of the abstract explanation of local content policies, it is important to make a case study on two (2) countries. Two reasons lead the research to make these two case studies. Firstly, three (3) of the selected countries are emerging oil and gas producers, while the other two (2) are mature oil and gas economies. This will facilitate understanding of what drives the adoption of local content policies at different stages of the extractive industry value chain. The countries selected are Norway, Brazil, Kenya, Tanzania and Uganda. Norway, Brazil are mature economies that have implemented local content policies since the 1970s.\(^{51}\) While Kenya, Uganda and Tanzania are nascent or emerging oil and gas producers.\(^{52}\) It is clear that lessons fare to be drawn from mature local content regimes and economies to the nascent economies so as to reap the full benefits of implementing such policies.

\(^{50}\) Hufbauer, Gary Clyde, Jeffrey J. Schott, and Cathleen Cimino-Isaacs. *Local content requirements: A global problem*. Vol. 102. Columbia University Press, 2013.

\(^{51}\) Brekke, Josefine Smith. “Machine learning effects on the Norwegian oil and gas industry.” Diss. 2020.

\(^{52}\) Steinhauer, Ineke, et al. “Advisory review of the environmental and social impact assessment for the East Africa Crude Oil Pipeline (EACOP)/Uganda” (2019).
10.5.1 Brazilian and Norwegian Oil and Gas Industry: The Local Content Setting in Mature Oil and Gas Producers

The local content policy in Brazil and Norway both have four main policy objectives, to increase domestic participation on a competitive basis, to develop the national technological advancement, to improve the domestic industry capabilities, as well as to create employment channels for the domestic workforce. It should be noted that both Brazil and Norway are among the wealthiest economies in the world with a large domestic market, favourable business climate, efficient financial markets as well as a high level of domestic driven innovation and technological adoption mechanisms. Both Norway and Brazil found offshore oil and gas resources; Brazil is endowed with 13.1 billion barrels of proven reserves and 16 trillion cubic feet of proven natural gas reserves. Norway is endowed with 8.6 billion barrels of proven reserves and 66 trillion cubic feet of proven gas reserves. These resources brought about huge investments in Norway and Brazil; the extractive foreign investment led to the development of the petroleum industry in both Norway and Brazil.

Both Norway and Brazil developed giant national oil companies, Norway created Statoil (currently known as Equinor) while Brazil created Petrobras. These two national oil companies held a monopoly over the domestic oil and gas value chain. Both countries build domestic capabilities using knowledge transfer mechanisms, training programs and development of R&D. The national oil companies both control most of the oil and gas production in Norway and Brazil, including other multinational oil and gas companies.

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53 Acheampong, Theophilus, Marcia Ashong, and Victoria Crystal Svanikier. “An assessment of local-content policies in oil and gas producing countries.” The Journal of World Energy Law & Business 9.4 (2016): 282–302.
54 Ibid.
55 Ibid.
56 Noreng, Øystein. “Brazil and Norway–Offshore petroleum experiences and lessons.” The Journal of Energy and Development 35.1/2 (2009): 79–99.
57 Ibid.
The licensing system in Brazil established local content targets created by the APN. The multinational oil companies were to meet the scores on the basis of technical, financial and local content targets throughout the exploration to the production phase of the oil and gas value chain. The Norwegian licensing procedure did not follow strict requirements on local content targets. The policymakers specified that Norwegian-based firms should be chosen whenever the firms were competitive in price, quality and delivery.

The Brazilian and Norwegian oil and gas governance had incentives and penalties. In Brazil, the fiscal policy had exemptions on the oil and gas-related goods that are manufactured in Brazil, the raw materials used in manufacturing domestic goods and services were exempted from a social security system, import tax and tax on industrial products and social integration plan. The Merchant Marine Fund was established by the Brazilian government to finance the 17 new shipyards and the expansion of the existing shipyards. It should be noted that Norway also leveraged on the shipping industry that the Country possessed in local content development. Furthermore, Norway created the ‘Goods and Service’ Office that was the Watchdog on the quality, price and delivery of the goods and services that were manufactured in Norway. Norway also developed a gradual fiscal regime according to the development of domestic capabilities. The political will of the policymakers in Norway and sentiment of local content development was known to the multinational oil and gas companies.

The Brazilian and Norwegian oil and gas industry had a systematic institutional set-up. In Brazil, the Conselho Nacional de Politica Energetica created guidelines for local content policies in harmony with the Ministry of Mines and Energy. The Regulatory activities fall under the

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58 Ngoasong, Michael Zisuh. “How international oil and gas companies respond to local content policies in petroleum-producing developing countries: A narrative enquiry.” Energy Policy 73 (2014): 471–479.

59 Tordo, Silvana, et al. Local content policies in the oil and gas sector. The World Bank, 2013.

60 Ibid.

61 Gonzales Rodriguez, Marco Antonio. “Success below the surface: Explaining success in the management of petroleum resources in Norway and Brazil.” MS thesis. Norwegian University of Life Sciences, Ås, 2013.
responsibilities of Agência Nacional do Petróleo, which sets the minimum local content requirements. The PROMINP includes the Minister of Mining and Energy, the Minister of Development, Industry, and Trade Ministry, President and Services Director of Petrobras, the President of BNDES, the President of ONIP and the President of the Brazilian Petroleum Institute. In Norway, the Ministry of Petroleum and Energy was responsible for policymaking and awarding licences that met the Norwegian requirements. The Norwegian Petroleum Directorate dealt with the technical control and regulatory advisory functions. Lastly, Statoil was the state-owned monopoly that was and still is instrumental in maintaining the government interests on behalf of the government.

10.6 Analysis of the Norwegian and Brazilian Local Content Regimes

The Norwegian and Brazilian local content regimes are the exemplary and poster boys for oil and gas governance as well as local content implementation and adoption. The analysis of these regimes will be undertaken under four significant issues. These are the institutional set-up, the nature of the local content policy and the rationale of implementing the policy.

10.6.1 The Institutional Set-up

Local content development relies heavily on the presence of good independent institutions, just like any other policy. Since local content policies are susceptible to corruption, the presence of independent institutions provides checks and balances that lead to effectiveness of the policy. Structurally, Brazil and Norway divided labour between different institutions. The business and regulatory interest of the government

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62 Ibid.

63 Tordo, Silvana, et al. *Local content policies in the oil and gas sector.* The World Bank, 2013.
were separated within the same oil and gas governing framework. The division of labour was to achieve domestic capabilities to facilitate the domestic industry to function at an internationally competitive level. Statoil and Petrobras emphasized on commercial activities while other government agencies regulated the oil and gas industry.

10.6.2 The Nature of the Local Content Policy

Local content can be approached in one of two ways, the policy’s regulatory model can be either based on principle or rule-based associated with stringent requirements. The nature of the local content policy is through government intervention into the oil and gas value chain. Such intervention must be either through a rule-based approach or a strict, stringent approach within the oil and gas economy. The Norwegian model of local content adopted a principle-based approach that did not institute strict quantitative local content targets that were associated with hefty fines for non-compliance. Instead of creating laws and rules that were strict on the foreign investors, the Norwegian model implemented the ‘ten commandments’ that were the framework that governed the oil and gas sector as well as local content policies in Norway.

Meanwhile, Brazil adopted a strict regulatory approach that did not appreciate the limitations facing the oil and gas industry. The Brazilian local content model allowed space for creative compliance, due to the stringent local content plans that were to be made in the local content booklet. The restrictive Brazilian rules led to a legitimacy crisis as the industry could not meet the objectives of the policymakers. This led to

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64Mendonça, Roberto Wagner, and Luiz Guilherme de Oliveira. “Local content policy in the Brazilian oil and gas sectoral system of innovation.” *Latin American Business Review* 14.3–4 (2013): 271–287.

65Mendes, Pietro A.S., et al. “Reforming Brazil’s offshore oil and gas safety regulatory framework: Lessons from Norway, the United Kingdom and the United States.” *Energy Policy* 74 (2014): 443–453.

66Ibid.

67Noreng, Øystein. “Brazil and Norway–Offshore Petroleum Experiences and Lessons.” *The Journal of Energy and Development* 35.1/2 (2009): 79–99.
corruption scandals such as the car-wash scandal in Brazil that were motivated by oil and gas operators circumventing the industry’s requirements through corruption.68

10.6.3 The Rationale and Objective of the Local Content Policy

The rationale behind adopting and implementing local content policies is a fundamental principle to the effectiveness and efficient implementation of the policy. Brazil and Norway understood that for local content policies to propel their economies to success, they needed to focus on the capacity development and gradual domestic integration into the oil and gas industry without heavily affecting the market forces. Hence, they emphasized R&D development, transfer of knowledge, technological transfer and achieving more from the multinational oil companies than just compliance of the local content targets.69 For instance, Norway did not define what local content was but developed mechanisms that could channel domestic value creation and facilitate local participation.70

10.7 Lessons for Emerging Oil and Gas Producers Such as Kenya, Tanzania and Uganda

Kenya, Uganda and Tanzania have recently been the new kids on the oil and gas block. These emerging oil and gas producers do not possess the technology, capital, capacity and supporting industries to develop from the maximum output of the industry.71 In terms of gas resources,
the countries do not have the domestic demand to contain the gas supply for their domestic consumption. But the following are the lessons that Kenya, Uganda and Tanzania can take into consideration from the Norwegian and Brazilian experience.

a. The nascent oil and gas economies must have clear guidelines to the roles and responsibilities of different stakeholders. The economies must have a favourable business climate to bolster further investment that is backed by good transparent political decisions.

b. The nascent oil and gas economies must not only place emphasis on the rents that are accrued from the multinational oil companies but also the development of competent domestic-based firms that leverage on the domestic capabilities to integrate the oil and gas value chain.

c. The nascent oil and gas economies must also create a synergy between the domestic and international supply firms so as to develop competence in terms of price, quality and delivery within the domestic industry.

d. The nascent oil and gas economies must understand that the oil and gas industry is characterized by highly sophisticated technology. Hence, they must invest in technology development and capabilities, through educational programmes in tertiary institutions. Furthermore, through shadowing schemes between foreign and local experts.

e. The fact that Kenya, Uganda and Tanzania are nascent oil and gas economies, the local content policy is ‘protective’ in nature. The policy creates a deliberate preference for domestic firms in terms of goods and services. These economies must take note that the oil and gas industry is an industry intertwined with global value chains. The industry’s main customers and investors are not found in the domestic market. Having strong protective measures, through local content policies, will inadvertently delay further investment in the sector. Secondly, multinational oil companies are not found in transferring technology to domestic firms the governments must devise means that develop these capabilities faster and not being dependent on the foreign investors.

f. The nascent oil and gas economies must take note that the discovery of their resources is during the wake of the clean energy wave. With
the pandemic outbreak of the Coronavirus, that has brought about massive fatalities to human life, but the lockdown provision has exhibited what a cleaner world could be. The foreign investors will rush into renewable energy, and this might leave stranded resources in Kenya, Uganda and Tanzania. Hence, the local content policies must be adopted not for developing capabilities in the extractive industry but also the renewable energy industry.

In essence, Kenya, Tanzania and Uganda must understand that local content policies are not only developed through protective mechanisms that develop infant domestic industries. But rather through the dynamic and peculiar development industrial and technological development that involves the clustering, synergy and cooperation of different actors within the East African region. This cooperation mainly facilitated the domestic knowledge base, leading international competence through regional mechanisms, so as to enhance the competitiveness of the domestic firms relative to the foreign firms.

### 10.8 Creating a Regional Content Policy for the Oil and Gas Industry in East Africa

East Africa must approach local content policy as a regional issue that can facilitate domestic industry integration without negatively affecting the market forces by attempting to be stringent. East African countries are members of the East African Community (EAC), they have also ratified the African Continental Free Trade Area (AfCFTA), the Common Market Eastern and Southern Africa Community (COMESA) and the Southern Africa Democratic Cooperation (SADC).[^72]

Through the tools of these vast regional agreements such as the Business Council of the EAC, the Educational policies in SADC and the synergy towards the

[^72]: Langston, Charles A., Andrew A. Nyblade, and Thomas J. Owens. “Regional wave propagation in Tanzania, East Africa.” *Journal of Geophysical Research: Solid Earth* 107.B1 (2002): ESE-1.
African Union Mining Vision that facilitates regional value chains in between African countries, and the Common Market Protocol that facilitates the free movement of the domestic workforce within the East African region, a regional content policy can be created for the efficient and effective domestic integration into the nascent oil and gas industry.

A regional content policy in East Africa would facilitate the creation of regional linkages that could pool talent in the region, making the countries operate on larger economies of scale. This can be through a regional procurement scheme that would standardize goods and services at an internationally competitive price, quality and delivery. The regional content policy will also address institutional failure, countries like Kenya, Tanzania and Uganda that are ‘party states’ have a tendency of regulatory capture due to lack of transparency and heavy infiltration of corruption in governmental institutions. The move of regulating local content policies from a national to a regional scale creates an accountability sentiment due to the increased numbers of stakeholders.

The thought of developing a regional content policy in East Africa must sound absurd and ambitious, since the cooperation of Kenya, Tanzania and Uganda has ever collapsed in the 1970s. The collapse of the first East African Community was mainly due to different ideologies that were the underpinning framework of governance at the time, Kenya and Uganda were capitalistic countries while Tanzania was a socialist country this led to clashes within the interests of the region. Furthermore, Kenya was accused of having the lion’s share of the EAC by Tanzania and Uganda; such accusations led to the break-up of the first EAC. But currently, the new EAC has more members not only Tanzania, Kenya and Uganda but also South Sudan, Rwanda and Burundi. Furthermore, East Africa has currently developed infrastructure on a regional scale such as the East African Crude Oil Pipeline and the

73 Los, Bart, Marcel P. Timmer, and Gaaitzen J. de Vries. “How global are global value chains? A new approach to measure international fragmentation.” *Journal of Regional Science* 55.1 (2015): 66–92.
74 Lodge, Tom. “Corruption in African Politics.” *Oxford Research Encyclopedia of Politics* (2019).
75 Cooksey, Brian. “Tanzania and the East African Community: A comparative political economy.” Discussion Paper 186, European Centre for Development Policy Management, Maastricht (2016).
76 Ibid.
Lamu Port and Lamu-Southern Sudan-Ethiopia Transport Corridor such projects are vital for the region’s growth.

Thus a regional content policy should identify the stakeholders, create a platform for stakeholder engagement, adopt, synchronize and harmonize local content policies into the region, compare and contrast the regional content policy from international best practice as well as developing a regional content unit that evaluates and monitors regional content development in the East African region. A regional content policy is the best local content policy option for Kenya, Tanzania and Uganda; the policy is more principle-based and non-protectionist against foreign investors.

10.9 Conclusion

The Norwegian and Brazilian domestic economy have similar features in that they can absorb the foreign direct investment from the oil and gas industry and efficiently leverage their competitive advantages for the development of the whole economy. Due to the high demand of governmental control especially when oil and gas prices in the international market both Norway and Brazil created national oil companies that had the monopoly share of the market, both countries introduced local content policies as a means of governmental control and intervention into the oil and gas sector, both countries advocated for provisions for the training of domestic workforce as well as technology transfer from foreign investors to domestic suppliers. However, the policy design was dependent on the individual Country’s ability to enforce and monitor the policy as well as the peculiar conditions prevailing in the domestic economy, and this has been a pivotal aspect in local content success in both Norway and Brazil.

It should be noted that leading local content countries such as Nigeria and Angola who have been the pioneers in the oil and gas industry in Sub-Saharan Africa (SSA) have truly failed to implement credible policies such as those of Norway and Brazil regardless of the fact that all these
countries are mature oil and gas producers. The main reason for local content policy failure in SSA is the ‘transferist’ aspect, whereby policies are transferred from mature developed economies and implemented in a ‘copy-paste’ manner in developing countries such as Kenya, Tanzania and Uganda without taking into consideration the prevailing circumstances staging these policies for immediate failure from their inception in the oil and gas industry. For example, the Norwegian or Brazilian local content model is neither technically nor politically adaptable in Tanzania, Kenya and Uganda since the countries do not face similar problems. Norway and Brazil had a strong shipping industry prior to the discovery of the oil and gas resources, the skills and capabilities from the shipping industry could be leveraged on the oil and gas industry unlike Kenya, Tanzania and Uganda where the driving industry has been agriculture, and the skills from this sector are not transferable to the sophisticated capital-intensive oil and gas sector. Though Kenya, Tanzania and Uganda must adopt the policy design from Norway and Brazil, they must not adopt the policy in ‘one-size fits all’ approach but the countries must synchronize and harmonize the policy to the prevailing domestic circumstances.

Since Kenya, Tanzania and Uganda do not have the absorptive capacity to integrate the oil and gas industry, the countries should adopt a regional content policy, which will create stronger regional value chains. The regional value chain will solve the current bottlenecks such as access to finance, development of particular technologies as well as create a conducive climate in the region to attract further investment in the sector as well as maintain intra- and inter-regional trade within the members of the EAC that will further develop downstream and upstream linkages. Hence countries such as Kenya, Tanzania and Uganda must consider using regional integration initiatives as a means of developing their domestic economies, promoting industrialization as well as gaining a competitive advantage against the multinational oil and gas companies.

Most importantly, as emphasized in this chapter, with respect to energy transitions and local content, the nascent oil and gas economies must take note that the discovery of their resources is during the wake of the clean energy wave. With the pandemic outbreak of the Coronavirus, that has brought about massive fatalities to human life, but the lockdown provision has exhibited what a cleaner world could be.
foreign investors will rush into renewable energy, and this might leave stranded resources in Kenya, Uganda and Tanzania. Hence, the local content policies must be adopted not for developing capabilities in the extractive industry but also in the renewable energy industry.

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