International Journal of Scientific Engineering and Research (IJSER)
ISSN (Online): 2347-3878
Impact Factor (2020): 6.733

The Impact of Risk Management on the Multinational Oil and Gas Industry in Sub-Saharan Africa (SSA)

Inemesit Ekong

LIGS University, Ph.D. Program in Project Management, Hawaii, USA

Abstract: ***Risk management is a critical part of any industry, although it is essential in the oil and gas industry. Workers in the multinational oil and gas industry in Sub-Saharan Africa (SSA) are often exposed to various risks daily while executing company operations and dealing with various chemicals and hazardous substances at their disposal. Lack of risk management strategies exposes multinational organisations and workers to serious risk of harm. The concept of risk management identifies and analyses the threats that multinational oil and gas industries in SSA can encounter or control. The risk can be attributed to different sources, including financial challenges, legal responsibilities, technology issues, errors in strategic management, accidents, and natural disasters. The research uses a semi-systematic review to analyse various risks that multinational oil and gas companies encounter in their daily operations and strategies to manage them. They include but not limited to political instability, social instability, the risk of the Dutch disease, and environmental risks attributed to oil spills. Specifically, the research investigates major risks affecting the oil and gas industry in SSA, examines the impact of identified risks, and recommends risk management strategies for the risk affecting the multinational oil and gas companies in SSA. Findings from this research revealed that multinational companies in SSA such as Shell and BP companies, among others, use a six-step model to mitigate all risks effectively. However, the process requires enhanced communication and collaboration from all stakeholders. The findings are important because they highlight the significance of risk management and mitigation.***

Keywords: environmental risk, political risk, risk management, risk mitigation, risk of Dutch disease, social tension

1. Introduction

The oil and gas industry in Sub-Sharan Africa (SSA) has been characterised by gradual growth after discovery of significant hydrocarbons resources in this region. The discovered hydrocarbon is developed, produced and the oil and gas sold to the global market, including Europe. The oil and gas industry faces considerable pressure to decarbonise and enhance renewable energy production, in addition to the many inefficiencies in their operations. The market has attracted many multinational corporations to engage in oil and gas exploration. Angola, Nigeria, and Cameroon are the earliest countries in SSA to discover large oil and gas deposits. Many of the economies in SSA rely on the oil and gas industry at the expense of other sectors. Despite the significance of the oil and gas industry in SSA, it encounters risk from political instability, social tension risk, risk of Dutch disease, and health and environmental risks attributed to oil spills. Workers in the multinational oil and gas industry in SSA are often exposed to various risks daily while executing company operations and dealing with various chemicals and hazardous substances at their disposal. Lack of risk management strategies exposes the multinational organisations and workers to serious risk of harm. The concept of risk management identifies and analyses the threats that multinational firms in Sub-Saharan Africa's oil and gas industry can encounter or control. The risks can be attributed to different sources, including financial challenges, legal responsibilities, technology issues, errors in strategic management, accidents, and natural disasters.

1.1 Objectives of the Study

The research aims to:

1) Determine risks affecting multinational oil and gas companies in SSA.
2) Examine the impact of identified risks on the multinational oil and gas industry in SSA.
3) Recommend mitigation strategies for the risks affecting multinational oil and gas companies in SSA.

1.2 Significance of the Study

Findings from this research are essential in informing decisions undertaken by multinational oil and gas companies in SSA and governments to increase the industry's efficiency.

2. Research Methodology

The research uses a semi-systematic review to analyse the effects of risk management on multinational oil and gas companies operating in the SSA. According to Snyder (2019), the method is suitable for the topic that has been conceptualised differently and studied by researchers in different disciplines. The method is suitable for this study because it is impossible to review all the articles published about risk management in SSA oil and gas industry (Snyder, 2019). Besides, the approach focuses on how research in this field has progressed over time and the development of the topic in different research traditions. The research used studies published in peer-reviewed journals, government publications, and company reports concerning the risks faced by oil and gas industry operations in SSA. The articles were researched online using the Google Scholar search engine.

The inclusion criteria involved peer-reviewed studies, government, or reputable organisational publications, with analysis done thematically.

3. Knowledge of the Issue

3.1 Background of the Oil and Gas Industry in Sub-Saharan Africa

The oil and gas industry in SSA is at crossroads because, on the one hand, the product prices are soaring, and many discoveries of hydrocarbons have been found in the region. At the same time, the sector is characterised by inefficiencies. Countries in the region face considerable pressure to decarbonise and embrace renewable energy. The continent has the potential for renewed energy sources and large oil and gas reserves, leading to the discussion about whether there is a need to increase investment in oil and gas or large-scale decarbonisation (SAOGA, 2015). Industrialisation and poverty reduction in SSA require much energy. According to Mitchel (2022), the region needs economic growth of about 6-7% to substantially lower poverty, which is a daunting figure, given the world Bank forecast of a 3.6% average growth of countries in the region in 2022. The electrification rate was 45% in SSA in 2019, meaning that over 570 million people had no electricity. Although the region is home to about 15% of the global population, it accounts for only 4.3% of the global energy demand and less than 1.75% of the global electricity consumption (Copinschi, 2022; p.693).

For decades, the SSA region has attracted multinational players in the energy industry and represents a crucial part of the activities of international oil and gas companies. Many governments and global development agencies or actors have projected that the exploitation of resources in Africa would prompt the continent's economic growth by providing essential financial capital to engage in development strategies (SAOGA, 2015). However, the reality is complicated because most economies register low economic development (Copinschi, 2022; p.693).

3.1.1 Oil Production and Reserves

Sub-Saharan Africa has numerous natural resources, especially oil. However, it appeared in the global oil and gas map recently compared to other countries producing hydrocarbons, such as North and Latin America, the Middle East, and North Africa. After discoveries of oil in the Gulf of Guinea, production started in the 1960s. In Angola, oil production began in 1955, in Nigeria in 1956, and in Congo in Brazzaville and Cameroon in the 1970s. As such, oil production got underway in the SSA in the 1970s after ending the civil war in Nigeria that lasted from 1967 to 1970 (Copinschi, 2022; p.694). Oil shocks in 1973-1979 caused by the nationalisation wave in OPEC countries led to a production boom in SSA. The two successive oil shocks opened new exploration and production chances across the globe, especially in SSA, where governments were keen on attracting new investors in the oil and gas sector. The SSA governments provided favourable terms to multinational oil companies that were kicked out of OPEC countries, mostly seeking to diversify their portfolios. None of the oil-producing countries in SSA ever nationalised their oil industries due to the weakness of the state in Africa (Copinschi, 2022; p. 694). Despite OPEC encouraging the nationalisation of oil industries, Nigeria never took the initiative, and neither did Angola nor Congo. It is the reason SSA became one of the oil and gas regions to benefit from the 1970s OPEC nationalisation policy.

A second oil boom experienced in the 1990s increased offshore oil discoveries in SSA. Oil exploration expanded to many other countries, both onshore and offshore, with new oil and gas producers, such as Ghana, Chad, Niger, Mauritania, and Sudan, emerging (Copinschi, 2022). The results entailed an increase in the production of SSA oil from 400,000 b/d in the late 1960s to over 2.5 million b/d (Mbpd) in the mid-1970s and later to 4 Mbpd and 5 Mbpd in the 1990s and in 2019, respectively (p.695). Oil reserves rose significantly from 10 billion barrels in the 1970s to over 60 billion in 2019 (Copinschi, 2022). SSA is home to over a dozen oil producers today despite some countries such as Cameroon and Gabon gradually nearing the end of their oil discoveries and production. Other countries may also join oil producers in the region as more governments from across the continent are granted exploration licenses.

The current production of the continent estimated at 5 Mbpd represents less than 5% of the world's oil production with oil reserves making only 3.5% of the world's total (Copinschi, 2022; p.695). According to Cherif and Matsumoto (2021), the openness of SSA to foreign investors makes it a hotspot for oil production and exploration and a leading deep-water offshore centre of oil production. Today, many multinational oil corporations and independent junior companies are engaged in the exploration and production of oil and gas in Sub-Saharan Africa. Table 1. below shows the oil production and proved reserves in Sub-Saharan Africa.

Table 1: Oil Production and Proved Reserves in Sub-Saharan Africa 2020

	Proved Reserves (in Mb)	*Share of global reserves (%)*	*Production (in 000 bpd)*	*Share of global production %)*
Nigeria	36,890	2.13	1743	2.09
Angola	7783	0.45	1220	1.46
Congo-Brazzaville	2882	0.17	310	0.37
Gabon	2000	0.12	216	0.26
Chad[a]	1500	0.09	127	0.15
Sudan[a]	1500	0.09	92	0.11
Equatorial Guinea	1100	0.06	126	0.15
Cameroon[a]	309	0.02	71	0.09
DR Congo[a]	278	0.02	22	0.03
Ivory Coast[a]	154	0.01	38	0.05
Mauritania[a]	154	0.01	2	0.00
Niger[a]	147	0.01	18	0.02
Ghana	23	0.00	195	0.23
South Africa	23	0.00	99	0.12
TOTAL Sub-Saharan Africa	**58,711**	**3.39**	**4883**	**5.85**

Note: Oil production and proved reserves (2020) from producing countries in Sub-Saharan Africa. Adapted from "Energy and the Economy in Sub-Saharan Africa" by P. Copinschi, 2022 in M. Hafna & G. Luciani, *The Palgrave Handbook of International Energy Economics*, Palgrave Macmillan. Copyright 2022 by P. Copinschi.

3.1.2 Production of Natural Gas and Reserves

The SSA region relies on many multinational organisations involved in the exploration and production of oil and gas to develop hydrocarbon resources, given that no country plays a central role in exploring the oil and gas industry. Little exploration targeted specific gas, with most of it being considered as an unwanted by-product of oil. Most of the gas was mainly flared on site. Limited infrastructure to commercialise the natural gas industry being flared in SSA means that the industry had delays in development. The industry started developing in the late 1990s, with the first LNG plant emerging in 1999 in Nigeria (Copinschi, 2022). Equatorial Guinea, Angola, and Cameroon followed in 2007, 2013, and 2018 respectively to connect the region to the global natural gas market. Nigeria is the largest producer of natural gas, its product accounting for 7% of the global production, and the country ranking among the top five in production of natural gas behind Qatar, Australia, Malaysia, and the United States. The East African region initially ignored by international oil and gas players has joined the market after discovering large deposits of natural gas in Tanzania and Mozambique. Table 2. below shows the natural gas production and proved reserves in Sub-Saharan Africa.

Table 2: Natural Gas Production and Proved Reserves in Sub-Saharan Africa 2020

	Proved Reserves (in Mb)	*Share of global reserves (%)*	*Production (in 000 bpd)*	*Share of global production %)*
Nigeria	36,890	2.13	1743	2.09
Angola	7783	0.45	1220	1.46
Congo-Brazzaville	2882	0.17	310	0.37
Gabon	2000	0.12	216	0.26
Chad[a]	1500	0.09	127	0.15
Sudan[a]	1500	0.09	92	0.11
Equatorial Guinea	1100	0.06	126	0.15
Cameroon[a]	309	0.02	71	0.09
DR Congo[a]	278	0.02	22	0.03
Ivory Coast[a]	154	0.01	38	0.05
Mauritania[a]	154	0.01	2	0.00
Niger[a]	147	0.01	18	0.02
Ghana	23	0.00	195	0.23
South Africa	23	0.00	99	0.12
TOTAL Sub-Saharan Africa	**58,711**	**3.39**	**4883**	**5.85**

Note: Natural gas production and proved reserves (2020) from producing countries in Sub-Saharan Africa. Adapted from "Energy and the Economy in Sub-Saharan Africa" by P. Copinschi, 2022 in M. Hafna & G. Luciani, *The Palgrave Handbook of International Energy Economics*, Palgrave Macmillan. Copyright 2022 by P. Copinschi.

3.1.3 Importance of African Oil

SSA oil is essential to African economies and the rest of the world, including the European Union. The oil produced in SSA is sold in various markets across the globe, including Europe. 7% of EU oil imports in 2010 were from Sub-Saharan Africa, whereby Nigeria was the largest source. The oil amounted to 314 million barrels or $65 billion. Nigeria can become a strategic potential supplier of Europe if it can develop its oil and gas reserves. Many oil exporters from SSA sell their oil products to countries such as Germany, France, Spain, the UK, Portugal, the Netherlands, and Italy. Many countries operating in the SSA oil and gas industry can be categorized as super-majors, independents, state players, and minnows (Baumuller et al., 2015; p.12). Super-majors are companies with a market capitalisation exceeding $150 billion, such as Exxon Mobil, Shell, BP, Total, and Chevron. Independent companies comprise ENI, ConocoPhillips, and Repsol-YPF, while key state players include China National Petroleum Corporation, Saudi Aramco, and the National Iranian Oil Company (NIOC) among others. Asian oil companies, including China, Saudi Arabia, Malaysia, South Korea, and the Gulf States, have increased their regional operations in recent years. The companies can effectively compete with Western multinationals operating in SSA oil and gas industry.

The Oil and gas industry is high-stakes for many countries in SSA. The industry is essential for the economy of many producers, such as Angola and Nigeria, accounting for a significant proportion of the GDP. According to Baumuller et al. (2015), the sector accounted for two-thirds of Angola's GDP and over 90% of state revenue in 2009 (p.13). In Nigeria, the industry accounted for 80% of the state's revenue in 2009 and 90% of its income from exports. Oil exports from other countries are small relative to other countries, although the income remains crucial for the economies. Nonetheless, the extent to which the oil sector benefits the development of African countries is disputable.

3.2 Risks and Risk Management

Risks arise whenever threats exploit vulnerabilities in our systems, processes, or facilities. For instance, hackers can exploit vulnerabilities in the IT security system, or a fire can start because of an electrical fault and spread due to problems in the fire detection system. Osborne (2012) defines risk as a potential future problem or chance for opportunity (p.9). Businesses encounter numerous risks, including fire, floods, theft, price volatility, human error, and vandalism among many more. According to Crowther and Seifi (2010), risks affect people's capacity to meet business objectives and, in some instances, even threaten the business. Many businesses suffer some disruptive situations during their lifetimes. Many risks affecting businesses are beyond their control because they are attributed to external forces like nature and changes in the political or economic environment (Osborne, 2012; p.12). Research by Paton (2015) reported that many risks are also attributed to people's activities with very few natural events due to external influences. When people come into the equation, things often go wrong.

Risk management is the responsibility of individuals and organisations. According to Passenheim (2014), the organisation makes decisions to manage information risks, although they are not the sole duties of IT departments. Risk management involves the decisions that people and companies make and actions taken in response to identified risks. Risk management aims to help entities protect themselves from the effects of the risks and be confident that the systems used are secure to meet their needs (Passenheim, 2014). In cases where risk decisions affect multiple entities, coordination is necessary to manage the risks. Companies should engage in risk management throughout the life cycle

of a system or a service (Crowther & Seifi, 2010). Risk management's many benefits are ensuring the safety and well-being of workers, clients, and visitors, ensuring business resilience, showing support for business decisions, and protecting business profitability.

Managing risks is simple, and effective and has been proven to work in all business types and sizes. The five phases of managing risks begin with identifying risks, followed by risk quantification, identification of counter-measures, implementation of counter-measures, and finally, monitoring and review, as illustrated in Figure 1 (Osborne, 2012). Companies must first identify the risks before taking any meaningful measures against mitigation. Once the risks have been identified, they need to be quantified because the interest is in those considered significant enough to warrant some action (Lindauer, 2017; p.12). Quantifying risks entails sorting them through assessment using the likelihood of risk occurrence and the impact on the business.

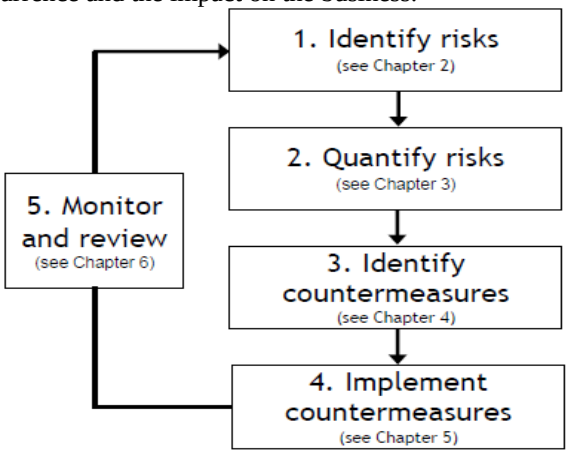

Figure 1: Risk Management Process

Note: The five phases of managing risks include identifying risks, quantify risk, identifying counter-measures, implementation of counter-measures, and monitoring and review. Copied from *"Risk Management Made Easy"* A. Osborn, 2012 (p.16), Bookboon. Copyright 2012 by A. Osborn.

A company can start dealing with severe risks by identifying and implementing possible mitigation measures. The stakeholders can remove, reduce, control, or recover from adverse events using various risk responses. These include acceptance, management, reduction or transfer, and insurance or taking contingency measures (Osborne, 2012; p.38). Step four is the implementation of the mitigation mechanisms perceived to be effective in managing the risks. These include transfer to someone else through insurance or outsourcing some high risks or non-core business processes. Business premises, goods, life and health, motor vehicles, and professional indemnity can be insured to provide safety for business (Crowther & Seifi, 2010). In some instances, the organisation can undertake risk reduction and control measures, such as having multiple locations of premises, installing fire detection systems, keeping buffer stocks, performing customer relationship management, due diligence, and evacuation mechanisms, among many more (Osborne, 2012; p.44). Once they have been implemented, monitoring their effectiveness in managing the risks is essential.

4. Results and Findings

4.1 Risks in the Sub-Saharan Oil and Gas Industry

Various multinational corporations operating in the SSA oil and gas industry encounter different risks, partly attributed to the availability of natural resources and the inability of governments to manage them. According to Paton (2015), a risk is a potential future problem or opportunity requiring decisions or actions. The risks arise from the vulnerabilities of the systems, processes, facilities, and exploitation of resources. This section analyses political risks, the risk of Dutch Disease, social tension, and environmental risks arising from the operations of multinational companies in the oil and gas industry in SSA.

4.1.1 Risks of Political Instability

Managers of many multinational corporations in SSA encounter political risks as the most challenging factors. Issues relating to political instability are broad and vary from one country to another. A study by Fernandes et al. (2019) provides political risks affecting Angola, one of the SSA countries producing and exporting oil. The presidency controls the sector through personalised connections by bypassing relevant institutions. The country still faces the challenge of stability and peace because the country is still developing, and the officials prioritise democracy based on law. Many governments depend almost entirely on the oil and gas sector to boost economic growth (Keye, 2022). Political interference by government officials, particularly ministers, come at the expense of the multinational corporations operating in the industry.

Political risks affecting many multinational companies in the oil and gas sector in SSA are classified into micro and macro. The micro category comprises risks affecting a specific country, while macro risks affect all foreign corporations (Keye, 2022). According to Fernandes et al. (2019), examples of macro risks are the devaluation of a currency, civil strife, and tax escalations. Micro risks comprise low-level instances of corruption and regulations affecting a specific sector. These political risks affect the activities of multinational corporations in the oil and gas industry in SSA through overlaps and intersections. A study by Keye (2022) classifies drivers of political risks into internal and external categories. Internal drivers arise from actions of state governments, operations of political groups, and extreme cases characterised by civil wars. On the contrary, external drivers can include diverse activities, such as international economic treaties, war, and diplomatic activities. These classifications are crucial in identifying frameworks for managing risks.

A case to illustrate the risk of political instability or influence is Angola. The events of armed struggle that led to independence left a scared nation, displaced populations, minefields, and food shortages (Keye, 2022). As a result, social inequality has been at the centre stage of the country's social construct. Revenue from the oil and gas industry has sustained the country since independence, with the sector

being politicised. Presidential succession in 2017 increased uncertainty linked to the oil and gas industry. BP, Exxon Mobil, and other multinational corporations operating in the country could be subjected to creeping nationalisation whereby the host country changes the terms of the petroleum agreement at the expense of the multinational firms (Lenkova, 2018). Consequently, political instability resulting from the 2017 elections in the country affected the oil and gas industry in Angola.

A strong connection exists between parastatals running the oil and gas industry and the government. According to SAOGA (2015), a lack of clarity about regulatory frameworks, especially unattractive fiscal periods is among the major issues affecting the oil and gas industry in SSA (p.5). For instance, Sonangol is a Portuguese parastatal running oil and gas operations in Angola. The agency ceased paying the Angolan government years ago, and its political links to the president allowed them to gain power from the country's elite. The political relationship exposes the vulnerability of multinational oil and gas companies to political interference. Research by Transparency International (2020) shows that Angola has a low level of corruption, implying that the resources curse affects the country. International scrutiny of multinational firms in the oil and gas industry might favour the country at the organization's expense, exposing them to reputational risks. Fernandes et al. (2019) argue that the risks can be attributed to political risks, although they can also arise from market-led factors. Operational risks are also linked to political risks for many multinational organisations, such as Shell, BP, and Exxon Mobil.

4.1.2 Social Tension Risks in SSA Oil-Rich Countries

Many oil rich countries in Sub-Saharan Africa are characterised by increased social tensions that sometimes could degenerate into civil law, like the case of Nigeria. According to ExxonMobil (2018), the deteriorating socioeconomic situation is accompanied by political decay, leading to violation of human rights and violence, as was the case in the Niger Delta. Most of the produced oil in the region causes environmental degradation making residents lose many lives. Such regions also have repeated cycles of activism, militancy, and repression linked to oil exploration and production. Local authorities, most of which are deemed corrupt neglect the regions or locals, making the residents turn to the multinational oil companies for the benefits of oil production, given that the residents consider the oil ‘theirs’ (Copinschi, 2022; p.701). The companies are perceived to be the sole representatives of authorities because state institutions are practically non-existent on the ground. Many multinational oil companies pay considerable amounts of money to governments regarding royalties and income taxes. Nonetheless, the local communities feel entirely excluded from the benefits of oil production and complain about environmental degradation (Keye, 2022). Young members of the neglected communities regularly show hostility to oil companies, claiming access to positions of power and redefinition of oil rent distribution in favour of their communities. Residents apply pressure in different ways, including sabotage of oil pipelines, kidnapping employees of multinational oil corporations, and occupation of company plants and offshore platforms (Copinschi, 2022; p.702). Many multinational oil corporations are caught in the vicious circle in which their operations and revenues affect political life. A study by Copinschi (2022) reports that tendencies enabling the creation of a rent economy and collapse of political entities enhance frustrations where they become the first victims while the public considers them guilty (p.702). The double threat of local instability and accusations force companies to adopt programmes intended to help local populations benefit from oil directly while allowing them to continue oil exploration and production.

4.1.3 Risk of the Dutch Disease

Many issues, including civil strife and limited economic development, have accompanied the discovery of resources in many SSA countries. The problems are attributed to the curse of resources, which is characterised by the Dutch disease, exposure to oil/gas price volatility, and long-term social and economic development strategies (Baumuller et al., 2011; p.29). The Dutch disease is the adverse effects of having natural resources on an economy, including the sharp inflow of foreign currency from exporting oil and gas products. The large inflow of foreign currency leads to currency appreciation, making other products generated in the country trade at a less competitive price on the export market (Baumuller et al., 2011; p.29). The problem also creates higher levels of cheap imports, leading to deindustrialisation because many industries relocate to cheaper locations (Asiamah et al., 2022). Multinational oil and gas companies working in the countries need more supporting services as companies relocate to places with cheaper labour or resources.

4.1.4 Health and Environmental Risks

Many oil and gas multinationals’ operations' health and environmental impacts are attributed to environmental degradation and gas flaring. According to Lenkova (2018), gas flaring is burning waste gas. The activity is common in many SSA nations, including the Niger Delta. Many gas flares use an open pipe flare and run for 24 hours daily, with some being active for over 40 years (p.22). Many emissions from gas flaring comprise carbon dioxide, methane, sulphur dioxide, nitrogen oxides, carcinogenic substances, and unburnt fuel components, such as benzene, toluene, hydrogen sulphide, and xylene (p.22). Gas flaring common in Nigeria, Angola, and other countries causes various pollution-related illnesses. Some issues include gastrointestinal problems, skin conditions, cancers, and respiratory diseases. Keye (2022) adds that gas flaring has also contributed to global greenhouse gas emissions, worsening the issue of climate change.

Oil spills common in many oil exploration and production areas in SSA affect the environment. According to Baumuller et al. (2011, p.18), oil spillage results from many factors, such as malfunction, sabotage, and small-scale theft. Although significant oil spills have been reported over the years, minor oil spills collectively have the most significant environmental hazard. Besides, it is sometimes difficult to obtain information about minor oil spills in some countries, such as Angola, making it challenging to determine estimates and impacts. Oil spills affect people's health and the lives of

animals and sea creatures like fish. Economic ramifications comprise degradation of the environment, elimination of sources of income, and displacement of residents. Environmental risks also have economic and health impacts on people's livelihoods.

4.2 Risk Management Strategies

4.2.1 Risk Management for Political Instability

According to Fernandes et al. (2019), effective political risk management depends on a systemic and structural approach. The strategy is anchored on the internal interaction of stakeholders and external drivers of political instability in a country. Multinational oil and gas companies should first understand the nature of the risks so that they develop a risk management strategy that rhymes with the specific risk. A study by Boulos (2017) suggested that multinational companies should negotiate an equilibrium and use a stabilising cause in their agreement to protect themselves from future adversities. Having such a clause in the business agreement implies that the existence of the impact of government regulations on the fiscal benefits of a business requires a revision of the contractual benefits in the absence of unilateral state legislation or actions (Copinschi, 2022). For instance, Angolan BP ensures that they have a concrete agreement with the government to cushion their contractual benefits from expected political risks.

Multinational corporations such as BP operating in SSA understand that threats from political stability can be understood from risk mitigation documentation and must be addressed after assessment. Many organisations have risk committees to assess anticipated political risks and provide solutions before worsening conditions (Copinschi, 2022). Through interaction with state governments in SSA, the companies understand the unpredictable political environment and have an anticipatory mechanism cushioning them from uncertainties. For instance, the risk committee of BP Angola holds monthly meetings to deliberate on unpredictable political changes and oversees enacted structures to help the company endure political risks (Lenkova, 2018). Besides, the committee has an anticipatory mechanism for emerging risks. The committee's activities prepared the company well for the 2017 election in Angola with analyses of possible occurrences and outcomes. BP has also considered using bilateral investment treaties and political risk insurance to manage uncertainties arising from political risks. However, the organization's global status has helped it self-insure against political risks, although Copinschi (2022) suggests using a positive relationship in the business environment as another strategy to cushion against political risks.

4.2.2 Risk Management for Social Instability

Multinational oil and gas companies operating in SSA overcome the double threat of social instability and accusations by the public using programmes that directly benefit the locals. According to Copinschi (2022), some companies have well-publicised activities insisting that their operations not only focus on oil extraction and generation of revenues for governments but also help locals through academic scholarship programmes and infrastructure development like roads, schools, clinics, and housing (p.701). The companies also provide job training, fund small businesses, or support the fight against epidemics such as AIDS. The study continues, stating that multinational oil companies in the Niger Delta spend over 100 million dollars on community development projects to restore legitimacy or their reputation as perceived by local communities and international observers (p.701). Mitchell (2022) adds that some of the projects funded by oil companies are well-designed and valuable and address the residents' need to help the local economy. Nonetheless, some multinational oil corporations opt for cash payouts to local leaders to quell agitated youth activists, although the solution is only short-lived. Chukwana (2015) warns that despite these efforts, much of such infrastructure developed by oil companies stalls because of lack of funds to cover running costs and if the programmes have no lasting impact on local development and a lack of partnership with public authorities. IEA (2022) criticises this approach noting that multinational oil companies are not development agencies, given that they are private entities aiming to do business rather than development. Many activities by the companies act as corporate philanthropy and need help to answer the weaknesses of local or national governments (Madumere, 2022). The lasting solution can originate from local and national governments redefining the development agenda for oil-rich regions with the help of revenue from oil and gas production.

4.2.3 Managing the Dutch Disease

The problem entails many stakeholders in Sub-Saharan countries, including the government and multinational oil and gas companies. Asiamah et al. (2022) recommends innovation and diversification of revenue income activities for affected countries to minimise dependence on oil and gas exports and stimulate the growth of other sectors. For instance, the countries can use income from the export of oil and gas to spur the growth of the agricultural and industrial sectors so that they manufacture goods cheaply rather than import (Asiamah et al., 2022). Implementing these measures requires coordination and collaboration of all stakeholders, including multinational oil and gas companies.

4.2.4 Environmental Risk Management Strategies

Managing environmental risks follows all the phases of risk management illustrated by Osborne (2012, p.18). The risk is already identified, and many multinationals move to quantify the risks, identify the benefits and likelihood of affecting the company. One of the identified countermeasures is compensating victims affected by events attributed to the operations of multinational oil and gas companies in SSA. For instance, Osborne (2012) argues that compensation is common in the oil spill agenda in Nigeria, reducing the priority of clean-up and holding those responsible accountable (p.21). Some fishers and farmers in Nigeria have found compensation lucrative, making them allow oil spills to continue for some days before reporting. Compensation in Angola shows challenging politics concerning payouts in oil spills, with some claiming that small payouts have been made over 2-3 years (Osborne, 2012; p.22). The analysis of the effectiveness of compensation as the most used mitigation measure for oil spills illustrates step 6 of

monitoring and reviewing implemented risk management strategies.

5. Conclusion and Recommendations

Risks arising from political instability, social instability, the Dutch disease, and environmental risks are among the challenges that multinational oil and gas companies encounter in their operations in Sub-Saharan Africa. Political risks in many countries endowed with oil create turmoil in business operations because they expose the organisations to the possibility of not earning from their investments. The risks are common in oil-rich countries such as Nigeria, Angola, and Cameroon, where a simple political disagreement can affect the operations of oil and gas companies. Many countries depend on oil export revenue to run their economies. The high foreign incomes affect country exports in the international markets, making the countries neglect other sectors, hence the beginning of the Dutch disease. Environmental risks from oil spills and gas flaring contribute to climate change, health risks, and environmental degradation. Risk management strategies are recommended to follow the stipulated steps beginning with identification and ending with monitoring and review. Multinational oil and gas corporations in SSA should consider stakeholder engagement and collaboration to manage the risks effectively.

References

[1] Ahmed, J. (2019) 'Key to stakeholder relationship management in the oil and gas industry', *Africa Oil and Gas Report*, Dec. 27, 2019, available from: https://africaoilgasreport. com/2019/12/gas-monetization/key-to-successful-stakeholder-relationship-managementin-the-oil-and-gas-industry/. [Accessed Feb. 14, 2023].

[2] Asiamah, O. et al. (2022) 'Natural Resource Dependence and the Dutch Disease: Evidence from Sub-Saharan Africa', *Resource Policy*, vol. 79, online.

[3] Baumuller, H. et al. (2011) 'The effects of Oil Companies' Activities on the Environment, Health, and Development in Sub-Saharan Africa', *Directorate General for External Policies of the Union, European Parliament*.

[4] Boulos, A. J. (2017) '*Assessing Political Risks'*, Independent Petroleum Association of America, IPAA, available from: https://www.ipaa.org/wp-content/uploads/2017/01/PoliticalRisk.pdf

[5] Cherif, R. & Matsumoto, A. (2021) 'Sub-Saharan African Oil Exporters: The Future of Oil and the Imperative of Diversification', *International monetary fund*, African Department, available from: file:///C:/Users/Muliks/AppData/Local/Temp/enspecial-series-on-covid19subsaharan-african-oil-exporters-the-future-of-oil-and-the-imperative-of-1.pdf. [Accessed Feb. 14, 2023].

[6] Copinschi, P. (2022) 'Energy and the Economy in Sub-Saharan Africa', in Hafna, M. & Luciani, G. *The Palgrave Handbook of International Energy Economics*, Palgrave Macmillan.

[7] Crowther, D. & Seifi, S. (2010) *Corporate Governance & Risk Management*, Bookboon.

[8] ExxonMobil (2018) 'Managing Community Engagement', *ExxonMobil*, available from: http://corporate.exxonmobil.com/en/community/corporate-citizenship-report/human-rights-and-managing-community-impacts/managing-socioeconomic-impactsand-risks?parentId=f1d5e90f-1506-4002-a9f4-b379a23f26ba. [Accessed Feb. 14, 2023].

[9] FCWC (2018) 'Ghana: Angry residents protest oil exploration in Keta basin', FCWC, 16th May, available from: https://fcwc-fish.org/publications/news-from-the-region/1621-ghanaangry-residents-protest-oil-exploration-in-keta-basin.html. [Accessed Feb. 14, 2023].

[10] Fernandes, A. J., Jimenez, A., Kraak, J. M., & Tsagdis, D. (2019) 'Managing Political Risk in the Oil and Gas Industry in a Developing Economy: The case of BP in Angola', *European Journal of International Management*, vol. 13, no.5, pp. 733-755.

[11] IEA. (2022) 'Africa Energy Outlook 2022', *International Energy Agency* (IEA), available from: https://iea.blob.core.windows.net/assets/27f568cc-1f9e-4c5b-9b09-b18a55fc850b/AfricaEnergyOutlook2022.pdf. [Accessed Feb. 14, 2023].

[12] Keye, A. (2022) 'Oil and Gas Management,

[13] Lenkova, O. (2018) 'Risk Management of Oil and gas Company in Terms of Strategic Transformations', *Espacios*, vol. 39, no. 6, pp. 1-12.

[14] Lindauer, R. (2017) *Modern Risk Management Remarks*, Bookboon.

[15] Madumere, N. (2022) 'The Impact of Stakeholder Management on the Oil and Gas Industry in Africa: A Case Study of Oil Companies and African Host Communities', *Accord*, Feb. 28, 2022, available from: https://www.accord.org.za/ajcr-issues/the-impact-of-stakeholder-management-on-the-oil-and-gas-industry-in-africa-a-case-study-of-oil-companies-and-african-host-communities%EF%BF%BC/. [Accessed Feb. 14, 2023].

[16] Mitchell, J. (2022) 'Stick or Twist: The Future of Africa Oil and Gas', available from: https://www.offshore-technology.com/analysis/stick-or-twist-the-future-of-african-oil-and-gas/. [Accessed Feb. 14, 2023].

[17] Osborne, A. (2012) *Risk Management Made Easy*, Bookboon.

[18] Passenheim, O. (2014) *Enterprise Risk Management*, Bookboon.

[19] Paton, C. (2015) '*Investment Opportunities in the Oil and Gas Sector in Sub-Saharan Africa'*, Frost & Sullivan.

[20] SAOGA. (2015) 'Supporting the Upstream and Midstream Oil & Gas Sectors', Business Report, available from: [Accessed Feb. 14, 2023]

[21] Snyder, H. (2019) 'Literature Review as a Research Methodology: An Overview and Guideline', *Journal of Business Research*, vol. 104, pp. 333-339.

[22] Transparency International. (2020) Angola, *Transparency International*, available from: https://www.transparency.org/en/countries/angola. [Accessed Feb. 14, 2023].