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The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com

Vol. 7, Iss. 3, pp 410 – 420. August 12, 2020. www.strategicjournals.com, ©Strategic Journals

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Accepted: August 10, 2020

ABSTRACT

Sustainable business practices encompass set of action plans that seek to preserve the resources presently available on earth, so that they can be beneficial to the current and future generations. These practices ensure that environmental, social and economic sustainability are achieved. This paper explored the concept of attainment of the sustainability in the oil industry in the three sectors. The oil industry practices towards environmental sustainability include ensuring that the environment is kept safe both directly and indirectly to both the environment and human lives. Waste management in the oil industry can be achieved through reduction, reusing materials such as containers, treatment of waste by detoxification and degradation. Social sustainability is achieved through corporate social responsibility where the industry participates by giving back to the society through projects that benefit the society. The study employed descriptive research design with employees of National Oil Corporation of Kenya (NOCK) being the target population. A sample of 65 management employees participated in the study. A structured questionnaire with close ended questions was utilized in the study. The study established that it's important to evaluate the performance of the oil industry and the measures that can be used to maintain its sustainability. The industry can conduct evaluations in their community before initiating any development projects to ensure protection against any adverse effects that might be caused. The study recommended that it's important for the oil industry to ensure sustainable environmental, social and economic environment. Interventions such as price control by the oil industry can be put in place by avoiding hiking of oil prices and ensuring affordability for oil products. This can be done by ensuring the provision of employment and business opportunities for people to promote economic growth. The oil industry can also contribute to the economy by fulfilling its fiscal duties through paying taxes. The study concluded that development of modern oil sector infrastructure would be vital towards environmental and economic sustainability of the country by promoting. Intervention measures should be taken to ensure this industry contributes to economic development, social equality and environmental protection.

***Key Words**: Business Sustainability, Oil Industry*

CITATION: Maundu, J. (2020). Impact of sustainable business practices in petroleum industry: A case study of National Oil Corporation of Kenya**.** *The Strategic Journal of Business & Change Management*, 7(3), 410 – 420.

INTRODUCTION

The Kenyan petroleum industry is involved in upstream, midstream, and downstream activities. Although Kenya began oil exploration in 1953 it was not until 2012 when the oil exploration activities lead to the discovery of oil in the Rift valley (Nanok and Onyango, 2017). Since 2012 exploration and production activities of the oil in several basins have been actively ongoing with the National Oil Corporation of Kenya, a state actor, playing an active role in partnership with Tullow Oil Company. The Kenyan petroleum industry has several local and international midstream and downstream players.

Oil exploration, production, storage, refinery, and associated uses are known to contribute largely to environmental degradation, economic growth, and give rise to diverse social issues that affect the community. As a result, the petroleum industry is under pressure to adopt sustainable business practices that will not only lead to the creation of economic value but also benefit the social and environmental pillars of sustainability.

Most businesses in the oil and gas industry are embracing sustainable business practices and including them in their long and short term strategies. Sustainable business practices, according to Rudnicka (2016) is a three-dimensional approach to business which requires an enterprise to be economically feasible, socially responsible, and environmentally friendly. The sustainability approach enables each business to create economic value for its survival in the industry. However, as the business strives to be economically significant, it should also return benefits to the society and the environment within which they operate (Piscicelli, Ludden, and Cooper, 2016). Businesses need the community and the environment to create economic value. Particularly, the oil industry gets all of its raw materials from the environment and sells its end products to the consumers who are members of the community. The activities of oil companies during extraction, processing, and transporting negatively impact the environment and society through pollution.

The issue of sustainable business practices took root in the 90s. Bergquist (2020) observed that sustainability was largely accepted by business corporations in the 1990s though evidence that environmental sustainability was not a new concept then, exists. The scholar further noted that the need for businesses to create economic value for growth is quite an old concept. It is only in the 90s that unification of economic viability, environmental sustainability along with social responsibility occurred and business strategy incorporating all the three core approaches emerged. Studies by Junior et al. (2016) reveal that current that over 96% of the organizational leaders worldwide agree that sustainable business practices should be part and parcel of the companies' business approaches. Therefore, business leaders in the oil and gas sector must not only worry about the bottom line but also address social concerns and carry out environmental protection for sustainability (Ibrahim, Hami, and Othman, 2019).

Further to this, the world leaders in a bid to tackle the political, economic, and environmental concerns affecting the world mooted the idea of sustainable development goals in 2012. According to the United Nations Development Program, UNDP (2020) world leaders ratified sustainable development goals in 2015 and came into force in 2016. Among other matters, the sustainable development goals advocated for climate change and bettering the status of the society through education, poverty eradication measures, and promoting partnerships through causes. The sustainable development goals agreed upon by world leaders do not carry the force of the law, however, it was left upon individual nations to develop the legal framework that would guide its implementation in their respective territories. This means that every organization operating in a certain country would, by default, have to comply with the requirements of the sustainable development goals since it is part of the laws governing their operations. The demands of the sustainable development goals required businesses to adopt new ways of carrying out their operations for profitability, cost reduction, and economic growth. With the advent of sustainable development goals, there has been a great focus on the role played by the oil and gas industry in environmental degradation along with global warming. Additionally, due to the concerns of global warming, lobby groups are succeeding in shifting the consumers' preference for goods manufactured by any firm to those specifically produced by firms with a record of environmental conservation and social responsibility.

The oil and gas industry contributes substantially to environmental degradation through its exploration, production, processing, storage, and transportation activities. On the other hand, the demand for oil and gas as well as its products are soaring globally. This situation portends a challenge to the petroleum industry where it has to balance between creating economic value out of its businesses by meeting the demand for oil along with gas products and positively benefiting the society and the environment. Mojarad, Atashbari, and Tantau (2018) pointed out that major oil corporations in the world are responsible for causing major environmental disasters thus generating reliability concerns from policymakers and trust issues from the public. Additionally, there is a significant relationship between the oil and gas industry and unsustainable business methods (Anis and Saddiqui, 2015).

Problem Statement

Sustainable business practices are continually taking root in most organizations across the world. This was occasioned by the need to tackle the increasing sociopolitical, economic, and environmental concerns in the world. Globally, businesses are including the three core sustainability issues of economic feasibility, environmental protection, and social responsibility in their business strategies. However, studies from several parts of the world indicate that the oil sector continually fails to balance between environmental, social, and economic variables (Mojarad et al., 2018; Ibrahim et al., 2019; Anis and Saddiqui, 2015). Consequently, lack balance in the application of sustainable business approach make it difficult to measure the impact of sustainable business practices on the oil sector. Indeed, several other studies single out the oil sector as the major culprit in environmental degradation despite the call for adopting sustainable business practices as a whole rather than in part. It is also apparent that most studies fail to evaluate the effect of sustainable business practices in the oil industry but rather choose to focus on the contribution of the oil sector towards sustainable approaches to business.

In the local setting, few studies exist that demonstrate the impact of sustainability practices on the petroleum sector. A report by the Ministry of Energy and Petroleum (2016) pointed out that there is a legal framework in place that require organizations to abide by sustainable business practices. Despite the report by the ministry, a research study by Zachary (2018) established that most people are not aware of the social responsibility of organizations while most managers possess barely enough knowledge of the concept of sustainable business practice. This indicated that there was a gap in the literature that this study sought to fill. In light of this finding, it was necessary to carry out a study that evaluates the impact of sustainable business practice on Kenya’s petroleum industry. Given that the National Oil Corporation of Kenya was the only state company licensed to carry out upstream activities along with midstream and downstream petroleum activities, this study focused on the company.

LITERATURE REVIEW

Sustainable Business Practices

Sustainable business practices are a three-pronged business strategy encompassing economic viability, social responsibility, and environmental sustainability. An article from the International Trade Center (2019) stated that the three variables of sustainable business approaches are interconnected. For instance, the social aspect of sustainable business practice brings together human resources, the community, and opportunities. On the other hand, the economic factor touches on profits, costs, and growth. The environmental variable encompasses prudent resource utilization, reversing climate change, and pollution, as well as promoting environmental conservation.

Stakeholder Theory

The study is based on the stakeholder theory. The model holds the claim that the spirit of business lies in building relationships and creating benefits to its stakeholders (Freeman and Dymitriyev, 2017). The stakeholders of an organization include any individual with the capacity to affect the performance of the organization and individuals who are affected by the firm's achievement of its organizational goals (Ngugi and Kihara, 2019). Particularly, the firm's main stakeholders include the firm's human resources, customers, shareholders, and the community (Freeman and Dymitriyev, 2017). The theory is relevant to the study since it focuses on the interdependence and connectedness of the pillars of sustainable practices.

Environment Sustainability in the Oil Industry

The activities of the oil sector contribute directly to environmental degradation. Globally, various studies pointed out that the lack of sustainable business practices in the sector contributes significantly to poor environmental sustainability. Anis and Siddiqui (2015) pointed out that though big oil corporations like Shell adopted the profit, people, and planet policies in their operations, there was evidence that the economic gains of an organization outweigh the environmental sustainability practices adopted by the same organizations. This implies that the gains oil companies get from the environment are more than the benefits the same organizations invest in the environment. This revelation calls for a deeper analysis to establish the reasons why oil companies seem to apply the business sustainability approaches in part rather than in full. There is an apparent gap in studies that fail to address the effect of sustainable business approaches in the global oil industry.

A study carried out in Iraq by Ibrahim et al (2019) established that the Iraqi oil sector significantly ignored environmental sustainability and focused on economic viability and less on social responsibility. The scholar ascertained that the cost of failing to protect the environment negatively impacted the performance of the oil industry in the long run. This appears to be the trend in most other oil-producing countries in the world. For instance, China appears to have stronger legislation on environmental degradation targeting its oil companies but evidence exists that few oil firms comply with the existing laws hence the widespread environmental degradation in the region (Shim, 2015). Another study by Schleifer and Sun (2018) targeting the palm oil industry in China and India corroborated the findings of the earlier studies that the oil industry always chooses profits over environmental conservation. Further to this, a study carried out by Mojarad et al. (2018) found out that most organizations ignored environmental sustainability and only took it up when the organization was financially stable.

Regionally, environmental protection in the oil business is not keenly observed. A study by Akali and Imam (2016) established that the Nigerian oil sector is plagued by corruption which inadvertently focuses more on economic value rather than benefitting the environment. The Nigeria oil sector contributes significantly to environmental pollution, ecosystem modification, poor solid waste management, and depletion of fish resources. The impact of ignoring the environment had cost implications for the operations of the Nigerian oil firms.

The studies analyzed in this section revealed that there is an imbalance in the application of sustainable business practices where environmental protection was viewed as unimportant. The stakeholder theory disputes this practice by claiming that none of the business stakeholders should be ignored since they are proportionately important to the organization (Freeman and Dymitriyev, 2017).

Social Sustainability in the Oil Industry

Sustainable business practices in the oil sector require that the industry players plow back a considerable amount of their revenues towards sustaining the community. Indeed, a study carried out in Kenya by Bos and Gupta (2015) established that social sustainability requires the oil sector players to employ staff from the community around their business premises, invests in social development projects to benefit the community, and encourage public participation in policy formulation. The scholars focused on the cost implications of social sustainability which if not well managed can affect the performance of the oil firm.

Globally, upstream, midstream and downstream oil activities have social consequences that must be addressed by oil companies. Ascensão et al. (2018) noted that Chinese companies involved in large scale infrastructural projects that support oil exploration, extraction, refinery, and transport frequently fail to consider the social pillar of business sustainability practices. Consequently, the impact of such an omission threatens the long term sustainability of the business. Conversely, in Oman, a study established that oil companies who chose oil suppliers in compliance with the government's directive on social sustainability guidelines realized diminishing business risks (Rentizelas, 2018). The evaluation by Ascensao et al (2018) focused more on large infrastructural projects and gave minimum attention to the issues of the oil industry. However, the analysis provided by the authors regarding the social sustainability in the oil sector is relevant to the study. The findings of the studies analyzed in this section are in line with the premise of stakeholder theory. The model requires organizations to develop meaningful connections with its immediate environment and the society for its to be able to generate profits that boosts its sustainability.

Studies indicate that a Poor social sustainability approach can trigger conflicts between the community and the oil company hence affecting the operations of the firm (Nanok and Oyango 2017; Anis and Siddiqui 2015). Additionally, the activities of oil exploration and production companies are frequently affected by disagreements between the political leaders and the community with the oil firm thus bringing undue interference to operations of the oil firm (Mwabu, 2018). Social conflicts deny the oil firm access to important resources like workforce and limit their access to oil exploration and drilling sites. Being a working paper, the analysis provided by Mwabu (2018) warrants deeper exploration since it captured mostly secondary data in its analysis of the social sustainability issue.

The literature reviewed in the social sustainability section was meant to provide answers to key issues in the study topic and provide additional evidence that justifies the need to carry out the study (Faryadi, 2018). In that respect, the studies reviewed in the section demonstrated insufficient literature that exists in the area of the study that warrants further investigation. Additionally, the studies provided additional information regarding social sustainability in the oil sector that adds to the body of knowledge in the study.

Economic Sustainability in the Oil Industry

Firms in the oil sector focus more on the economic pillar more than the social and environmental pillars of sustainable business practices. A study in Iraq established that firms in the oil sector-focused more on profitability, cost reduction, and the organization's economic growth without putting many investments in the other two pillars of sustainability (Ibrahim et al., 2019). However, several studies dispute this finding. For instance, a study by Rentizelas et al. (2018) established that firms that invest in environmental and social pillars of sustainable practices were able to bring down their operating costs by a significant percentage. Further to this point, a study by Ngugi and Kihara (2019) found that multinational firms like Shell BP had higher operating costs due to the failure to institute sustainable business practices resulting in to decrease in profits.

A well utilized economic pillar can lead to sustainable growth (Anis and Siddiqui, 2015). However, this can only be achieved if firms in the oil sector utilize resources prudently, and meet the social needs of the community. An analysis of Iraq's petroleum sector established that it generates most of the country's revenues. This overreliance on the revenues from the oil sector has instead led to poor environmental management due to factors like pollution and environmental degradation while the social aspect is taken care of by the improved employment activities in the country (Anis and Siddiqui 2015).

organization in the petroleum industry is able to realize profits in its operation when the reduce the overhead costs. A study by Small (2017) established that organizations that put in place proper management strategy which includes sustainable business practices is able to make profits by reducing the overhead costs. This finding is important since it provides evidence that supports the study. The stakeholder theory provides the basis within which an organization can generate profits by building relationships with all the stakeholders in the business. This includes the society as well as the environment.

METHODOLOGY

The study employed descriptive survey research design. The purpose of the study was to determine the impact of sustainable business practices on the performance of oil industry in Kenya. Target population included senior level management officers at the National Oil Corporation of Kenya (NOCK). A total of 50 employees participated in the study. These respondents were drawn from diverse organization departments including; marketing, corporate affairs, research & development, operations and logistics divisions. The key areas of interest for research included; examination of social, economic, and environmental sustainability on the performance of oil industry. The respondents were drawn from strategic offices which were directly involved with the determination and implementation of sustainability strategy. As such the group was selected to offer insight on the role of sustainable business practices on the performance of Kenyan oil sector. Structured questionnaire was used as the tool for data collection.

The questionnaire was split into four sections, which included; environmental sustainability, social sustainability, economic sustainability and oil industry performance. Linear regression test was performed seeking to evaluate the underlying association between independent sustainable business practices variables notably; environmental sustainability, social sustainability, economic sustainability versus dependent variable, oil industry performance.

RESULTS

Regression Analysis

The study performed a multivariate regression test between sustainable business practices factors verses performance of the oil industry.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841[a]	.707	.692	.22611

a. Predictors: (Constant), Economic sustainability, Environmental sustainability, Social sustainability

The results in table 1 highlighted the model summery of the regression test between sustainable business practices factors and the performance of oil industry. The test recorded an R-value of 0.841 and R-square value of 0.707. The results indicated that a strong positive correlation (R = 0.841) exists between sustainable business practices notably; environmental sustainability, social sustainability and economic sustainability and performance of oil industry. The results also showed that sustainable business practices factors; environmental sustainability, social sustainability and economic sustainability accounted for 71% of variability (R^2 = 0.707) in performance of oil industry. The results also implied that, 30% of variability in the performance of oil industry is attributed to factors external to sustainable business practices.

Table 2: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.519	3	2.506	49.023	.000[b]
	Residual	3.119	61	.051		
	Total	10.638	64			

a. Dependent Variable: Oil industry performance

b. Predictors: (Constant), Economic sustainability, Environmental sustainability, Social sustainability

The results in table 2 presented the Analysis of variance results for the test between sustainable business practices. The test computed F-statistic, F (3, 61) = 49.023 with a p-value of 0.000 ($p < 0.01$). First, the ANOVA results certify that there exists sufficient difference between the grouped independent variables for sustainable business practices factors and the performance of oil industry. Secondly, the test certified that there exists significant statistical association between sustainable business practices notably; environmental sustainability, social sustainability and economic sustainability and performance of oil industry which was significant at 0.01 significance level.

Table 3: Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.293	.345		.850	.000
	Environmental sustainability	.049	.087	.052	.560	.008
	Social sustainability	.225	.103	.221	2.178	.003
	Economic sustainability	.651	.083	.665	7.837	.000

a. **Dependent Variable: Oil industry performance**

The results in table 3 presented the coefficients table for the influence of sustainable business practices on the performance of oil industry in Kenya. The coefficients beta results will assist in developing the study model, which is; $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \acute{\varepsilon}$.

Where: Y = performance of oil industry, α = constant, $\beta_{1,2,3}$ = beta coefficients for sustainable business practices factors, X_1= environmental sustainability, X_2= social sustainability, X_3= economic sustainability and $\acute{\varepsilon}$= standard error.

The results in table 3 deduce the model: $\mathbf{Y = 0.293 + 0.048^* X_1 + 0.225^* X_2 + 0.651^* X_3}$

The results implied that for every unit change recorded in environmental sustainability a 0.048 unit's change will be recorded for the performance of oil industry. Also, a unit change in social sustainability will trigger 0.225 units change in the performance of the oil industry. Finally, the results deduced implied that for every unit change in economic sustainability will trigger 0.651 units change in the performance of oil industry.

DISCUSSION

On environmental sustainability and the performance of Oil Sector, the study established that environmental sustainability is a critical element within the purview of oil industry. All variants of oil products including; crude deposits, kerosene, diesel, petrol, lubricants and Liquefied Petroleum Gas have direct impact on the wellness of the environment. Upstream oil industry activities that involve the extraction of oil from the ground, employ heavy machinery and equipment. These activities result in causing a lot of environmental degradation. The findings in this study indicate that crude oil and natural gas extraction from the earth surface has a negative effect on the environment. These findings are supported by past studies notably; Akali and Imam (2016), Mojarad et al. (2018) and Shim (2015) all identified the extreme impact of oil and gas extraction processes on the environment. The study similarly establishes the lack of effective sustainable operational programs in the downstream activities for the oil sector. Cumulative effect of both upstream and downstream oil industry activities has resulted into destruction of the environment and also affecting the quality of air attributed to exhaust fumes and chemical emissions from oil industry agents.

On social sustainability and the performance in the Oil Industry, the study established that social sustainability commitments by petroleum companies wield an effect on the overall performance of the oil sector. This finding is supported in the study by Bos and Gupta (2015) who identified the responsibility of the oil industry within the communities in which they operate. The study establishes that oil companies efforts directed towards improving the wellness of community, such as providing the communities essential services such as; access to clean water, education and healthcare. The study establishes that existence of comprehensive department specifically dealing with issues of corporate social responsibility (CSR) significantly boosted oil companies social sustainability activities. Also, the effect of CSR in developing solutions that compensate the excessive negative effectives of oil industry upstream and downstream operations will require instituting long term programs for uplifting the community.

On economic sustainability and the performance in the Oil Industry, the study established that economic factor in oil sector is heavily influenced by operational costs. Traditional upstream and downstream technologies utilized in the oil sector are extremely costly. This is attributed to the heavy nature of infrastructure required to facilitate the extraction and transportation of oil products. Similarly, considerable operational costs are allocated to human resources directly involved with upstream and downstream activities. The study establishes that integrating sustainability with oil sector operations will require massive investments in all sections of the operational chain. This will also include retraining of the human capital into modern technologies for sustainable operational processes. This finding is supported in studies by Anis and Siddiqui (2015) and, Ngugi and Kihara (2019) who acknowledged the cost aspect for investing in sustainable operations within the oil industry.

CONCLUSION AND RECOMMENDATIONS

The study concluded that the future of oil sector operations lies with the adoption of sustainable operational practices across the three pillars of environmental, social and economic sustainability. Technologies utilized in upstream, midstream and downstream operations, have heavily contributed towards degradation and destruction of the earth surface, environment and the atmosphere. Investing in modern greener centered technologies for upstream to downstream oil sector operations will be the best approach towards reversing the impact of destructive oil sector operations. The study concluded that total technological shift will require reinstallation of sustainable greener operational infrastructure for the oil sector. In addition, increased research and capacity development will be vital in driving adoption of sustainable business practices within the oil sector.

The study made the following recommendations;

- Technology change in upstream, midstream and downstream operations of the oil sector operations from the current old systems used in crude oil extraction, refining and transportation into modern systems.
- Investment in research by oil companies towards development of cleaner and more effective operational models for upstream to downstream operations.
- Increasing funding by oil companies towards the expansion of corporate social responsibility programs. Boosting CSR programs through increased funding will enhance oil companies' efforts of giving back to the community by enhancing community wellness through education, healthcare and social programs.
- Introduction of regulatory policies by government that set limitations to carbon emissions by oil companies in all upstream to downstream operations. In addition, regulatory policies which include taxation guarantees should be introduced to compel oil companies commit funding towards CSR programs that directly benefit the communities in places where they operate.
- Skills upgrade for personnel working in oil sector. Integration of sustainable operational programs within oil sector will require more training for operating and handling newer systems that are environmentally friendly. More skilled personnel will also be required to undertake cost cutting measures such as adoption of recycling techniques, green energy use etc, for oil sector operations.

REFERENCES

Akali, M. Y., & Imam, M. I. (2016). Accountability and Environmental Sustainability: Nigerian Maritime Experience. *Asian Journal of Economics and Empirical Research, 2016*, 3(1), 1-5. DOI: 10.20448/journal.501/2016.3.1/501.1.1.5

Anis, M. D., & Siddiqui, T. Z. (2015). Issues Impacting Sustainability in the Oil and Gas Industry. Journal of Management and Sustainability 5(4), 115. DOI: 10.5539/jms.v5n4p115

Ascensão, F., Fahriq, S., Clevenger, A. P., Corlett, R. T., Jaege, J. A., Laurance, W. F., & Pereira, H. M. (2018). Environmental challenges for the Belt and Road Initiative. Nature Sustainability, 1 (2018), pp 206–20. Retrieved from https://glel.carleton.ca/PDF/landPub/18/18AscensaoetalNatureSustainability.pdf

Bergquist, A. (2017). Business and Sustainability: New Business History Perspectives. *Harvard Business School*. Retrieved from https://www.hbs.edu/faculty/Publication%20Files/18-034_39d7d71d-9e84-4e8b-97c0-0e626f75293c.pdf

Bos, K., & Gupta, J. (2016). Inclusive development, oil extraction, and climate change: a multilevel analysis of Kenya. International Journal of Sustainable Development &World Ecology, 23 (6), 482-492. DOI: 10.1080/13504509.2016.1162217

Faryadi, Q. (2018). PhD Thesis Writing Process: A Systematic Approach—How to Write Your Literature Review. Creative Education, 9, pp 2912-2919. Retrieved from https://doi.org/10.4236/ce.2018.916219

Freeman, R. E., & Dmytriyev, S. (2017). Corporate Social Responsibility and Stakeholder Theory: Learning from Each Other. *Emerging Issues in Management (symphonya.unimib.it)*, 2, 7-15. Retrieved from http://dx.doi.org/10.4468/2017.1.02freeman.dmytriyev

Ibrahim, Y. M., Hami, N., & Othman, S. N. (2019). Assessing of Imbalance among Economic, Environmental and Social Sustainability: Evidence from Oil and Gas Industry in Iraq. *Journal of Physics: Conference Series*, 1294 (2019) 072006. DOI:10.1088/1742-6596/1294/7/072006

International Trade Center. (2019). KENYA: Sustainable investment in agro-processing and light manufacturing. Retrieved from https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/PIGA_Kenya_20191029_with_hyperlinks(2).pdf

Junior, F. H., Galleli, B., Gallardo-Vázquez, D., & Sánchez-Hernández, M. I. (2017). Strategic aspects in sustainability reporting in oil & gas industry: The comparative case-study of Brazilian Petrobras and Spanish Repsol. *Ecological Indicators*, 72(2017), 203–214. Retrieved from http://dx.doi.org/10.1016/j.ecolind.2016.08.007

Mwabu, G. (2018). Kenya's Oil Governance Regime: Challenges and Policies. *CRPD Working Paper* No. 71. Retrieved from https://soc.kuleuven.be/crpd/files/working-papers/crpd-no-71-mwabu-full.pdf

Ministry of Energy and Petroleum. (2016). STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT OF THE PETROLEUM SECTOR IN KENYA. Retrieved from http://documents1.worldbank.org/curated/en/186991495657679496/pdf/SFG2851-V2-EA-P145234-Box402910B-PUBLIC-Disclosed-5-24-2017.pdf

Mojarad, A. S. Atashbari, V., & Tantau, A. (2018). Challenges for sustainable development strategies in oil and gas industries. Proceedings of the 12thInternational Conference on Business Excellence 2018, 626-638. DOI: 10.2478/picbe-2018-0056

Nanok, J. K., & Onyango, C. O. (2017). A socio-economic and environmental analysis of the effects of oil exploration on the local community in Lokichar, Turkana County, Kenya. International Journal of

Management, Economics, and Social Sciences (IJMESS), 6 (3), pp. 144-156. Retrieved from https://www.econstor.eu/bitstream/10419/171451/1/1006098852.pdf

Ngugi, C. A., & Kihara, A. (2019). INFLUENCE OF SUPPLY CHAIN SUSTAINABILITY ON PERFORMANCE OF COMPANIES IN THE OIL INDUSTRY IN KENYA. *International Journal of Supply Chain and Logistics*, 3 (2), 84 -104. https://carijournals.org/journals/index.php/IJSCL/article/download/299/417

Piscicell, L. Ludden, G. D., & Cooper, T. (2017). What makes a sustainable business model successful? An empirical comparison of two peer-to-peer goods-sharing platforms. *Journal of Cleaner Production*, 172 (2018), 4580 – 4591. http://dx.doi.org/10.1016/j.jclepro.2017.08.170.

Rentizelas, A., Jabbour, A. B. L., & Balushi, A. D. (2018). Social Sustainability in the Oil and Gas Industry: Institutional Pressure and the Management of Sustainable Supply Chains. *Ann Oper Res*. Retrieved https://doi.org/10.1007/s10479-018-2821-3.

Rudnicka, A. (2016). Understanding Sustainable Business Models. *Journal of Positive Management*, *7* (4), 2016, 52–60. http://dx.doi.org/10.12775/JPM.2016.02

Schleifer, P., & Sun, Y. (2018). Emerging markets and private governance: the political economy of sustainable palm oil in China and India. *Review of International Political Economy*, 25 (2), pp190-214. DOI: 10.1080/09692290.2017.1418759

Shinn, D. H. (2016). The Environmental Impact of China's Investment in Africa. *Cornell International Law Journal,* 49 (1) 2. Retrieved from https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1875&context=cilj

Small, L. B. (2017). Sustainability Practices That Influence Profitability in the Petroleum Industry. Walden Dissertations and Doctoral Studies. Retrieved from https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=4827&context=dissertations

UNDP (2020). Sustainable Development Goals. Retrieved from https://www.un.org/sustainabledevelopment/development-agenda-retired/

Zachary, M. (2018). Public and Private Sector Perceptions of Sustainability in Kenya: Practice, Barriers, Stakeholder Participation. *Kenya Climate Innovation Centre*. Retrieved from https://www.kenyacic.org/sites/default/files/publications/SUSTAINABILITY%20SURVEY_REPORT.pdf