

RESEARCH CONFERENCE 2020

Research Leading the Way For The Next 50 Years

Strategies to Maintain Profitability When Crude Oil Prices Fluctuate

**POSTER
PRESENTATION**

OCTOBER 1, 2020

**WALDEN
UNIVERSITY**

Author

Yussif Sulemana, DBA

Graduate

School of Management

yussif.sulemana@waldenu.edu

Supervisory Committee

Gene Fusch – Chair

Michael Campo – Committee Member

Diane Dusick – URR Member

Abstract

Rapid and sustained fluctuations in the crude oil market have remained a threat to national and multinational oil and gas corporations' financial performance. This qualitative descriptive single case study aimed to explore strategies oil production leaders used to maintain profitability when crude oil prices fluctuate. Six senior oil production leaders participated in the research. Data collection methods included semistructured interviews, company documents, direct observation, and a reflective journal. Based on the methodological triangulation and the use of thematic data analysis technique, three broad strategies emerged: relating to enhancing operational efficiency, business portfolio diversification, and optimization of capital structure.

Doctoral Research

Problem

The fluctuations in the crude oil commodity markets have impacted the financial performance of national and multinational corporations in sub-Saharan Africa (Akinlo & Apanisile, 2015). Since the 1980s, the crude oil market has experienced the most recurrent boom-bust cycles with the most price shocks occurring in last quarter of 2014 and into January 2015, where the world market price of the commodity plummeted to \$47 from a high of \$112 per barrel (Baumeister & Kilian, 2016).

- The **general business problem** was that fluctuations in the crude oil pricing market can impact negatively on the profitability of national and multinational oil and gas corporations.
- The **specific business problem** was that some national and multinational oil production leaders in sub-Saharan African nations lack strategies to maintain profitability when crude oil prices fluctuate.

Purpose

The purpose of this **qualitative, descriptive, single case study** was to explore the strategies that national and multinational oil production leaders in the sub-Saharan African nations deploy to maintain profitability when crude oil prices fluctuate.

Significance

Corporate leaders with requisite strategies would sustain profitability when market collapse, such as the 2014-15 occurrence with a replication happening currently where WTI futures oil prices plunged to -\$40 per barrel in April 2020 (EIA, 2020)

The findings from my study might equip business leaders in the oil and gas industry, oil market strategists, and energy policy analysts the requisite capital management skills to remain competitive when oil prices collapse. The specific strategies emerging from my study might support oil market analysts to proactively predict a potential market collapse and address debt management to avoid bankruptcy filings.

Theory or Framework

Kraus and Litzenberger (1973) Trade-Off Theory (TOT) of capital structure was the conceptual framework for this study. The key tenets of the TOT are:

Corporation leaders set their optimal cash reserve levels by balancing the marginal cost, and marginal benefits of holding the cash at that level

Taxation and bankruptcy penalties are the key factors that determine leverage within corporations' business operations

A firm requires a higher level of cash in periods of growth opportunities to avoid financial distress (Rehman & Wang, 2015).

The strategic building of cash reserves in periods of financial distress is the crux of the Kraus and Litzenberger (1973) TOT of capital structure.

Relevant Scholarship

Corporate leaders seeking to remain relevant and maintain robust financial performance in volatile markets may have to resort to optimal debt financing (Abel, 2017).

The optimization of the firm's financial structure involves a trade-off between the tax advantage of the firm's debt and the bankruptcy penalties as proposed in the TOT framework (Kraus & Litzenberger, 1973).

Dierker et al. (2019) in assessing the risk associated with external financing argued that the dynamism in TOT application whereby the business leader can adjust between debt and equity financing to optimally stay within the target leverage zone makes the TOT a superior model in safeguarding corporations against external financing risks.

Major oil price shocks that occurred in the years: 1973, 1974, 1979, 1980, and 1981 have each precipitated into major economic recessions (Hamilton, 1985).

Baumeister and Hamilton (2019), as well as Herrera et al. (2019), posited that the disruptive tendencies of crude oil supply from the producer and exporter nations have resulted in serious global economic challenges, especially in the consumer nations.

The crude oil market experienced the most recurrent boom and bust cycles, with the bust cycles threatening corporations' financial stability and the risks of contagion in the marketplace (Klein, 2018).

Oil exporting nations have often acted in ways since, 2014 to maintain market share and possibly render U.S. shale patch producers less competitive (Ansari, 2017; Behar & Ritz, 2017).

Research Question

What strategies did national and multinational oil production leaders in sub-Saharan African nations deploy to maintain profitability when crude oil prices fluctuate?

Participants

I used purposeful sampling to select six senior oil production leaders in a national oil and gas corporation in Ghana who had employed successful strategies to maintain profitability when crude oil prices fluctuated and participated in the study.

Procedures

Data collection methods included virtual semistructured interviews using the Google Duo application, which lasted between 45-60 minutes for each participant; company documents; direct virtual observation of the research participants as they carry out their daily routine activities in their offices; and reflective journaling.

I employed observation protocol and an interview protocol, which contained the research interview questions to standardize the data collection process. I observed each leader for 2 hours a day for two days. I used two weeks to gather ample notes from the observations.

Analysis

I did a **thematic analysis** of the transcribed interviews and observations, as well as carried out an in-depth **content analysis** of the company documents. **Themes** then emerged.

Findings

Themes from Analysis

- Operational efficiency through organizational restructuring and competitive oil price hedging
- Business portfolio diversification through effective asset management and innovative technologies
- Optimization of capital management structure through debt restructuring.

Limitations

Strategies to address potential limitations include:

- Expand sample size to include the entire study population
- Consider other sub-Saharan African nations other than Ghana as the study geographical location
- To consider other alternative capital structure models other than TOT
- Consider the use of quantitative design for similar study

Interpretation

The findings from this research provide energy corporations with the requisite business continuity strategies to remain competitive when oil prices collapse.

Recommendations

Embrace the growth of artificial intelligence and the internet of things to improve the efficiency of business operations and maintain profitability

Deployment of such state-of-art innovative technologies might improve the business leaders' understanding of this complex and unpredictable oil market environment

Sustainable tools in the accurate prediction of potential market collapse.

Social Change Implications

The direct impact of the oil price collapse, such as the prevailing oil market situation, is bankruptcy and job losses. Oil production leaders might apply these findings to enhance business continuity, avoid bankruptcy, and maintain profitability during oil price downturns. Maintaining profitability would help ensure employees' job security and flow of income. Sustained income would benefit employees and their families and could have a positive social impact on employees' local communities.

References

- Abel, A. B. (2018). Optimal debt and profitability in the trade-off theory. *The Journal of Finance*, 73(1), 95–143. <https://doi.org/10.1111/jofi.12590>
- Akinlo, T., & Apanisile, O. T. (2015). The impact of volatility of oil price on the economic growth in sub-Saharan Africa. *British Journal of Economics, Management and Trade*, 5, 338–349. <https://doi.org/10.9734/bjemt/2015/12921>
- Ansari, D. (2017). OPEC, Saudi Arabia, and the shale revolution: Insights from equilibrium modelling and oil politics. *Energy Policy*, 111, 166–178. <https://doi.org/10.1016/j.enpol.2017.09.010>
- Baumeister, C., & Hamilton, J. D. (2019). Structural interpretation of vector autoregressions with incomplete identification: Revisiting the role of oil supply and demand shocks. *American Economic Review*, 109, 1873–1910. <https://doi.org/10.1257/aer.20151569>
- Baumeister, C., & Kilian, L. (2016). Forty years of oil price fluctuations: Why the price of oil may still surprise us. *Journal of Economic Perspectives*, 30(1), 139–160. <https://doi.org/10.1257/jep.30.1.139>
- Behar, A., & Ritz, R. A. (2017). OPEC vs US shale: Analyzing the shift to a market-share strategy. *Energy Economics*, 63, 185–198. <https://doi.org/10.1016/j.eneco.2016.12.021>
- Dierker, M., Lee, I., & Seo, S. W. (2019). Risk changes and external financing activities: Tests of the dynamic trade-off theory of capital structure. *Journal of Empirical Finance*, 52, 178–200. <https://doi.org/10.1016/j.jempfin.2019.03.004>
- Energy Information Administration. (2020, April). *Low liquidity and limited available storage pushed WTI crude oil futures prices below zero*. <https://www.eia.gov/todayinenergy/detail.php?id=43495>

- Hamilton, J. D. (1985). Historical causes of postwar oil shocks and recessions. *The Energy Journal*, 6(1), 97–116. <https://doi.org/10.5547/ISSN0195-6574-EJ-Vol6-No1-9>
- Herrera, A. M., Karaki, M. B., & Rangaraju, S. K. (2019). Oil price shocks and US economic activity. *Energy Policy*, 129, 89–99. <https://doi.org/10.1016/j.enpol.2019.02.011>
- Klein, T. (2018). Trends and contagion in WTI and Brent crude oil spot and futures markets-The role of OPEC in the last decade. *Energy Economics*, 75, 636–646. <https://doi.org/10.1016/j.eneco.2018.09.013>
- Kraus, A., & Litzenberger, R. H. (1973). A state preference model of optimal financial leverage. *The Journal of Finance*, 28, 911–922. <https://doi.org/10.1111/j.1540-6261.1973.tb01415.x>
- Rehman, A., & Wang, M. (2015). Corporate cash holdings and adjustment behaviour in Chinese firms: An empirical analysis using generalized method of moments. *Australasian Accounting, Business and Finance Journal*, 9(4), 20–37. <http://ro.uow.edu.au/aabfj/vol9/iss4/3>