



## **Analyzing the Impact of Covid-19 on the Oil and Gas Industry: A Case Study of Petronas**

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### **ABSTRACT**

As a result of the Covid-19 epidemic, every industry in the world has been greatly affected. We took Malaysia's Petronas as an example to analyze how oil and gas industries were impacted by such a difficult international situation. This paper investigated how Covid-19 affected Petronas and how it responded to the sharp drop in oil price. In a questionnaire survey, we listed the problems that Petronas may face in this outbreak.

**Keywords:** Company Performance, Covid 19 Impact, Employee's Job, Petronas

### **INTRODUCTION**

Covid-19 has had a huge impact on manufacturing, services, catering, oil and gas, and other industries worldwide. It directly led to incalculable economic losses. Companies highly afforded to resist the massive impact of the sudden pandemic (Kee et al., 2021). As the national oil company, Petronas also has experienced a certain impact on their economic growth in the face of Covid-19 to some extent.

Petronas is a Malaysian oil and gas company. Established in 1974 and wholly owned by the Government of Malaysia, the company has been entrusted with the responsibility to develop and add value to the entire oil and gas resources of Malaysia and its trustees. Fortune magazine named Petronas the 158<sup>th</sup> largest company in the world in 2019. Since its inception, Petronas has grown into an integrated international oil and gas company with commercial interests in 35 countries/territories. At the end of March 2005, it consisted of 103 wholly-owned subsidiaries, 19 partially owned garments, and 57 associated companies. Together, these companies form a company engaged in a variety of oil and gas activities. The Financial Times has identified Petronas as one of the "new seven sisters": the most influential and mainly state-owned national oil and gas company from outside the OECD. The group is engaged in a wide range of oil activities, including upstream exploration and oil and gas production to downstream refining, sales and distribution of petroleum products, trade, gas treatment and liquefaction, network operation of gas transmission pipeline, LNG sales, Petrochemical production and marketing, transport, automobile engineering, and real estate investments. State oil provides a significant source of revenue for the Malaysian government, with half of the government budget dependent on dividends and a real government balance of 5 percent of the gross domestic product in 2011.



With the increasing impact of the epidemic, international air passenger traffic has been reduced sharply, high-speed traffic restrictions have been imposed in some parts of China, public transportation in urban areas has been suspended, and the frequency and radius of private car trips have been greatly reduced. Transportation, logistics and transportation, industrial and mining enterprises, and other industries cannot resume work in a short period of time, and the demand for diesel oil shrinks sharply, leading to a sharp decline in the consumption of the domestic refined oil market and a downward trend in domestic oil prices.

Major losers included Petronas Dagangan Bhd. and Petronas Chemicals Group Bhd., while favorites included Sapura Energy Berhad and Hibiscus Petroleum Bhd. Howie Lee, an economist at OCBC, noted that Bertrand's model suggests that the price of crude oil will fall to a level where production costs are lower. That seems to be \$30 a barrel, which is the average cost of production for the organization of the petroleum exporting countries. Raymond Yap, an analyst at Galaxy-CIMB Securities, said the research firm maintained its "overweight" rating on. The oil and gas sector highlighted the risk of a free fall in oil prices. "The impact on the Malaysian oil and gas industry is usually negative. During the 2014-2016 oil price downturns, Petronas cut operating costs at the expense of its suppliers and contractors."

Petronas responded that when we were in the global Covid-19 pandemic, it is not only the slump in oil prices bringing a huge impact on daily life and significant interference to the enterprise, and while oil prices collapsed, Petronas firmly adhered to the principle of its *amanah* (upholding trusts) by ensuring the employees follow value chain security and optimal operation of the business. Petronas closely monitors the situation in Malaysia and in the countries where it operates and will continue to adhere to local authority guidelines to put the safety of the employees and their families and our extensive network of partners and customers first.

To ensure a reliable supply of energy to support the daily needs of communities, businesses, and governments, its priority is to ensure that the operations continue to operate safely and efficiently throughout the value chain. During the Movement Control Orders (MCO), it is working closely with the relevant authorities to respond to the necessary requirements and continue to strictly comply with its health, safety, protection, and environment (HSSE) standards and best practices.

Petronas will continue to improve operational efficiency and commercial success while maintaining financial discipline in the face of the direct impact of the Covid-19 pandemic and anticipated headwinds, as well as the sharp drop in oil prices. To maintain the resilience and sustainability of the company, it will strengthen mitigation strategies of the short, medium, and long-term impact on the business. According to the financial statement of Petronas for the half-yearly report, in 2017 until 2019 it showed a good performance while in 2020 suddenly showed a significant decrease due to the Covid-19 (see Table 1).

**Table 1. Petronas Half-Yearly Financial Statement of 2017-2020**

Performance (RM bil)	1H 2017	1H 2018	1H 2019	1H 2020
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Revenue	108.1	117.2	121.1	93.6
EBITDA	45.2	25.4	54.7	29.4
Cash flows from operating activities (CFFO)	39.8	41.7	44.9	26.3

Ong (2020) For the first half end of June 30, 2020 (1H20), Petronas posted a net loss of RM16.5 billion versus RM28.9 billion for the previous corresponding period. Meanwhile, the cumulative revenue fell 22.7% to RM93.6 billion from RM121.11 billion in 1H19. Despite the net loss, the national O&G firm generated an operating cash flow of RM26.26 billion in 1H20. Its cash pile stood at RM156.86 billion as of June 30. Fitch Ratings (2020) reported that Petronas's SCP remains comfortable as we expect the company to maintain its strong financial profile despite the economic downturn and disruptions following the Covid-19 pandemic. We expect Petronas's upstream volumes to fall by about 4% during 2020 due to weaker demand. Domestic gas sales declined by 17% to 2,425 million standard cubic feet per day during 1H2020 while upstream volumes fell by 7% to 1.64 million barrels of oil equivalent per day.

Overall, due to long lockdowns imposed globally and the MCO in Malaysia, the company reported a slowdown. Operationally, both plants complied with the relevant government legislation and the volume of continuous production. Engen refining and lubricants mixing plants encountered a slowdown in their activities globally in a few areas, however, the customers continued to be supplied by inventory availability. The Star (2020) posted net losses in the first half end of June 30, 2020 due to impairment and weak prices, cautioned that its financial performance this year is expected by the low oil price and weak demand environment. Petronas said the industry continues to operate in a challenging and unprecedented market environment arising from a combination of severe demand destruction due to the Covid-19 pandemic and global market glut.

**Table 2. Selected Findings from the literature**

Authors Description	Schneider and Schartz (2020)	Jaafar (2020)	Aloui, Goutte, Guesmi, and Hchaichi(2020)	Burns & McDonnell, Granite Inliner, Drone Deploy S & B (2020)
Oil price collapse	1	1	1	1
Demand drops	1	1	1	1
Operational disruption and supply chain risk	1	1	1	-
Energy transition	-	1	-	-
Rig infection	-	-	-	-
Long term effect to the company	1	-	1	-
Job losses	-	-	-	-



Bankruptcy	1	-	-	-
Leader conflict	-	-	-	-
Financial distress	-	-	-	1

The Covid-19 outbreak affected all industry sectors including oil and gas industries. The outbreak of coronavirus (Covid-19) has attracted global attention, causing a huge impact on society and the economy across the world. Most countries have implemented lockdown and stay-at-home regulations to prevent the outbreak, causing an unprecedented impact on the oil and gas market. restrictions on movement and daily travel have caused demand shocks in the oil market.

Schneider and Schartz (2020) stated that between the beginning of 2020 and March 8, oil prices had declined by roughly 33%. On March 8, Saudi Arabia and Russia engaged in a price war, which was triggered by a breakdown in dialogue between OPEC and Russia. In the meantime, Covid-19 caused a historic (and highly uncertain) drop in demand, gave the global shutdown of economic activity in many sectors and the resulting decline in travel, changed consumer behaviors, and brought spike in unemployment. The combination of a price war and the economic shutdown contributed to an additional 18% decline in oil prices between March 8 and May 20, or a 45% decline from the beginning of the year to May 20, and a 69% drop since the peak in the summer of 2014 through May 20. These drops incorporate a large rebound in prices since April 21, without which declines would have been even more dramatic, further highlighting volatility in oil prices. Impact of Covid-19 compromise Petronas's demand and bring to surplus in supply.

Schneider and Schartz (2020) argued that Covid-19 brought long-term effects for companies. When an industry is in distress, one of the issues with credit ratings is that credit and equity investors may look at the near future rather than the current ratings. Rating agencies have downgraded many companies of oil and gas in 2020 and a high percentage of negative outlooks (75%). As of May 20, more than 76% of oil and gas companies have experienced a negative rating by S&P, (72% downgrades and 56% saw negative outlook changes). According to Burns & McDonnell, Granite Inliner, Drone Deploy S & B (2020), the impact facing Petronas are disruptions to demand, combined with its dramatic impact on financial markets leading to rapid price swings.

Jaafar (2020) stated that "as we navigate through the global Covid-19 pandemic which has led to a staggering impact on daily lives and major interruptions to businesses, in addition to the collapse of oil prices, Petronas stands firm in upholding its *amanah* (trust), to first and foremost ensure the wellbeing of our people followed by the safe and optimal operation of our businesses across the value chain". Petronas was struggling during the current economic slowdown and investigating whether their commercial property insurance policies will cover the disruptions in operations caused by the pandemic.

According to Aloui et al (2020), the fundamental driver of oil's price is market supply and demand. The oil supply is controlled by a cartel of oil-producing countries called OPEC (Alkhatlan, Gately, & Javid, 2014) and the demand is driven by production and transport activity such as electricity, gasoline, and kerosene. A large literature on the economic determinants of oil price fluctuations has emerged. Initially, oil price fluctuations were explained by the disruptions of global oil production associated with political events such as wars and revolutions in OPEC countries (Hamilton, 2003). Other research has shown





that oil price fluctuations since 1973 are explained by shifts in the crude oil demand (Baumeister & Kilian 2015; Gong & Lin, 2018; Kilian, 2008; Kilian, 2014; Kilian & Hicks, 2013; Kilian & Lee, 2014).

In the interim, Aloui et al (2020) clarified that the disease affected world economic activity. Yilmazkuday (2020), by using daily data on the global coronavirus disease 2019 deaths, showed that the effect of Covid-19 deaths is insignificant, and explained the plunge of oil price in March 2020 by the OPEC disagreement. In the same line of work, Maijama'a, Musa, Garba, & Baba (2020) investigated the impact on the global energy demand by using daily data on China's population, Chinese exchange currency rate, and international crude oil prices, from 23rd January to 8th February 2020. It revealed that the total population has a positive and significant impact on total coronavirus infected cases while the crude oil price is negative and significantly related to the coronavirus infected cases. Table 3 presents the literature review of the impact of Covid-19 worldwide on oil price and company performance.

**Table 3. Selected Findings from the Literature**

Author (year)	Significant Findings
Farmer (2020)	How the Covid-19 coronavirus is affecting the offshore industry
Aloui et al. (2020)	Covid 19's impact on crude oil and natural gas S&P GS Indexes
OECD (2020)	Fragile, oil-exporting developing countries will be hard hit by the consequences of the Covid-19 pandemic, and the opportunity exists to assist these countries to transition towards a low-carbon, more diversified, and resilient economic future.
Jupiter (2020)	Covid-19 Special Reports: Impact on Oil & Gas Industry and Government Intervention to Cushion the Impact (Sabah)
Tate (2020)	Covid-19 severely impacts oil and gas industries, thousands of jobs will be lost.
NST Business (2020)	APAC state oil firms face price, Covid-19 Impacts
Burns McDonnell, Granite Inliner, Droneemploy S&B (2020)	Financial Market-price swings
Owen (2020)	Petronas introduces special working arrangements for the Covid-19 pandemic

## RESEARCH METHOD

Research methods are strategies, processes, and techniques utilized to obtain the data. We used qualitative and quantitative methodology. The qualitative methodology focused on data collection and measure them within numbers. The qualitative methodology was used to analyze the data and understand people's perceptions about an event.



The data of this study were collected using secondary data of articles, company data, websites, and journals. These methods helped us to save time as we did not have to design new data. The secondary data comprised the existing data collected by other researchers or companies and available for others to use. Most of us get the data from Petronas's website, from which we evaluated the company downturns and measure the profit and loss.

## **RESULTS AND DISCUSSION**

Jaafar (2020) argued that Covid-19 gave a big impact of a steep drop in oil prices on all oil and gas industries however Petronas has maintained fiscal discipline in facing it. Petronas continued to drive operational efficiencies and commercial excellence while maintaining fiscal discipline in facing the immediate impact and anticipated headwinds of the pandemic as well as the steep drop in oil prices. Pant (2020) stated that on top of managing the crisis at hand, Petronas' leaders were strategizing the best plans to move forward. With the oil and gas industry being jolted by Covid-19 and the consequential slowing down of energy demand, Petronas had to plan for its survival and business continuity. This included investing heavily in its people

Petronas focused on three aspects when they began their transformation to be more agile and adaptable due to the company's emphasis on pace. Pant (2020) reminisced the beginning of the lockdown phase and how the entire Petronas had to get a new system of work in place overnight while ensuring the safety of its employees working on the ground at the same time, as many of Petronas' operations are essential services. The type of skills that they have to pivot to the new way of doing things would be very different. They are working side by side with businesses to start thinking about what skills would be.

Aloui et al. (2020) explained the outbreak affected on world economy including Malaysia. The impact on tourism and airlines has so worsened that Thai tourism will be affected by the number of Chinese tourists that could drop by 20% in 2020. Airlines are an important sector to support the oil and gas industry. Declines in airlines will be potential to dropping of oil and gas.

## **CONCLUSIONS**

Covid-19 is not only a global pandemic that impacts the health crisis. It has also affected the global economy around the world. Increasing unemployment, disrupting transportation, and restricting manufacturing industries are among the impacts of the disease. It occurs as most governments in the world underestimated the risks of Covid-19 infection and were mostly reactive in their crisis response. The outbreak is not likely to disappear soon, proactive actions are required to not only save lives but also protect economic prosperity in the future.

Pandemic has exerted varying degrees of influence on various industries, the falling oil price in Malaysia brought a serious impact on the economy. Petronas has responded to this worldwide disaster through positive strategic measures, such as employees' salary payment and encouragement to work from home to minimize the losses as much as



possible. Petronas had set a good example by taking a positive lead in response to the novel Coronavirus.

Furthermore, Petronas would be more efficient and excellent while maintaining fiscal discipline in facing the immediate impact. Since the Covid-19 outbreak, Petronas has taken action to ensure the safety of employees through several proactive steps to manage the risk of exposure and reduce the risk of spreading the pandemic. At every operational site, it has in place the necessary safety measures and additional protocols to ensure the safety of front-liners as they continue to discharge their duty of essential operations both onshore and offshore. It also restructured organization working arrangements for all employees who work from home where possible. Petronas did early preparation for facing this outbreak and contributed RM20 millions for medical equipment. This showed that Petronas is one of the companies that successfully manage the company well despite its economic crisis.

## REFERENCES

- Alkhatlan, K., Gately, D., & Javid, M. (2014). Analysis of Saudi Arabia's behavior within OPEC and the world oil market. *Energy Policy*, 64, 209-225.
- Aloui, D., Goutte, S., Guesmi, K., & Hchaichi, R. (2020). Covid 19's impact on crude oil and natural gas S&P GS Indexes. *SSRN Electronic Journal*. doi:10.2139/ssrn.3587740.
- Baumeister, C. and Kilian, L. (2015). Forty years of oil price fluctuations: Why the price of oil may still surprise us. Technical report, CFS Working Paper Series.
- Burns & McDonnell, Granite Inliner, Drone Deploy S & B. (2020). *April 14th webcast: Covid-19 Impact on the oil & gas industry*. Retrieved from <https://www.ogj.com/home/webinar/14172686/covid19-impact-on-the-oil-gas-industry>
- Courtney, T. (2020). *Experts say COVID-19 severely impacting oil and gas industry, thousands of jobs will be lost*. Retrieved from <https://www.newschannel10.com/2020/05/11/experts-say-covid-severely-impacting-oil-gas-industry-thousands-jobs-will-be-lost/>
- Das, K. N. (2020). *Malaysia's Petronas warns of project delays, aims to keep local capex*. Retrieved from <https://www.reuters.com/article/us-health-coronavirus-malaysia-petronas-idUSKCN21V1FM>
- Farmer, M. (2020). *How the Covid-19 coronavirus is affecting the offshore industry*. Retrieved from <https://www.offshore-technology.com/features/coronavirus-impact-offshore/>
- Fitch Ratings (2020). *Fitch Revises PETRONAS's outlook to negative, affirms 'A-' Rating*. Retrieved from <https://www.fitchratings.com/research/corporate-finance/fitch-revises-petronas-outlook-to-negative-affirms-a-rating-14-04-2020>
- Gong, X. and Lin, B. (2018). Time-varying effects of oil supply and demand shocks on china's macro-economy. *Energy*, 149:424–437
- Hamilton, J. D. (2003). What is an oil shock?. *Journal of Econometrics*, 113(2), 363-398.
- Jaafar, S. S. (2020). *Petronas to maintain fiscal discipline in facing Covid-19 impact, steep drop in oil prices*. Retrieved from <https://www.theedgemarkets.com/article/petronas-maintain-fiscal-discipline-facing-covid19-impact-steep-drop-oil-prices>



- Jupiter, M. (2020). COVID-19 Special Reports: Impact on Oil & Gas Industry and Government Intervention to Cushion the Impact (Sabah). Retrieved from [https://www.researchgate.net/publication/343905430\\_COVID-19\\_Special\\_Reports\\_Impact\\_on\\_Oil\\_Gas\\_Industry\\_and\\_Government\\_Intervention\\_to\\_Cushion\\_the\\_Impact\\_Sabah](https://www.researchgate.net/publication/343905430_COVID-19_Special_Reports_Impact_on_Oil_Gas_Industry_and_Government_Intervention_to_Cushion_the_Impact_Sabah)
- Kee, D. M. H., Faheem, M., Al-Anesi, S. M. L., Imran, M. Y., Hazrul, M., & Khairi, A. A. (2021). Navigating through the COVID-19 crisis: A Case study of Starbucks. *International Journal of Accounting & Finance in Asia Pasific*, 4(1), 24-36.
- Kilian, L. (2008). The economic effects of energy price shocks. *Journal of Economic Literature*, 46(4):871–909.
- Kilian, L. (2014). Oil price shocks: Causes and consequences. *Annu. Rev. Resour. Econ.*, 6(1):133–154.
- Kilian, L. and Hicks, B. (2013). Did unexpectedly strong economic growth cause the oil price shock of 2003–2008? *Journal of Forecasting*, 32(5):385–394.
- Kilian, L. and Lee, T. K. (2014). Quantifying the speculative component in the real price of oil: The role of global oil inventories. *Journal of International Money and Finance*, 42:71–87.
- Maijama'a, R., Musa, K. S., Garba, A., and Baba, U. M. (2020). Corona virus outbreak and the global energy demand: A case of people's republic of china. *American Journal of Environmental and Resource Economics*, 5(1):10–13.
- NST Business. (2020). *APAC state oil firms face price, Covid-19 impacts*. Retrieved from <https://www.nst.com.my/business/2020/03/578262/apac-state-oil-firms-face-price-covid-19-impacts>
- OECD. (2020). *The impact of coronavirus (COVID-19) and the global oil price shock on the fiscal position of oil-exporting developing countries*. Retrieved from <https://www.oecd.org/coronavirus/policy-responses/the-impact-of-coronavirus-covid-19-and-the-global-oil-price-shock-on-the-fiscal-position-of-oil-exporting-developing-countries-8bafbd95/>
- Ong, S. (2020). *Petronas to deepen push into RE after posting RM21b loss*. Retrieved from <https://themalaysianreserve.com/2020/09/07/petronas-to-deepen-push-into-re-after-posting-rm21b-loss/>
- Pant, D. (2020). *Petronas on the power of collaboration*. Retrieved from <https://www.peoplesmattersglobal.com/article/c-suite/farehana-hanapiah-petronas-on-the-power-of-collaboration-26760>
- Schneider, F., & Scharf, A. (2020). *The new world of Covid-19: Paradigm shifts in the oil and gas industry*. Retrieved from <https://www.natlawreview.com/article/new-world-covid-19-paradigm-shifts-oil-and-gas-industry>
- The Star. (2020). *Petronas expects performance to be severely affected this year*. Retrieved from <https://www.thestar.com.my/business/business-news/2020/09/04/petronas-expects-performance-to-be-severely-affected-this-year>
- Yilmazkuday, H. (2020). Coronavirus disease 2019 and the global economy. *SSRN Online Journal*. doi:10.2139/ssrn.3554381.