

Impact of Strategy on the Operational and Financial Performances of an Indonesian Coal Mining Company during COVID-19 Pandemic: A Case Study

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Abstract

In light of the emergence of COVID-19 pandemic, public life and industrial sectors have been significantly restricted as the attempt to curb the spread of the pandemic, which reduced the overall world energy demand. This study aims to explore the impact of competitive strategy on the operational and financial performances of an Indonesian coal mining company during COVID-19 pandemic. This study takes Adaro Energy as the object of the case study with analysis on operational aspects including coal production, sales volume, overburden removal, and lost time injury frequency rate. While financial data is analyzed by using the method formulated in Decree of Ministry of State Owned Company KEPMEN 100/MBU/2002, where eight financial indicators that cover profitability, liquidity, activity, and solvability are used to calculate companies' financial health. Through this study, it is found that Adaro Energy's operational and financial performances were negatively impacted by the COVID-19 pandemic, however, it is also found that Adaro Energy's cost leadership strategy implementation was able alleviate the negative impact of the pandemic and assisted the company in maintaining its performances. Therefore, this study helps to understand the concept of how the appropriate competitive strategy could assist organizations in navigating under rapid changes and uncertainty in their industries.

Keywords

Strategy, performance, coal, energy, COVID-19

1. Introduction

Strategy is an integral part of organizations. According to Porter (1985), strategies allow organizations to gain competitive advantage from 3 different bases, which are leadership strategy, differentiation strategy and focus strategy. Cost leadership emphasizes producing standardized products at a low per-unit cost for consumers who are price-sensitive. Differentiation strategy aimed at producing products and services considered unique industrywide and directed at consumers who are relatively price-insensitive. While focus strategy emphasize in producing products and services that fulfil the needs of small groups of consumers (Porter, 1985). Strategies also assist organizations in navigating under rapid changes and uncertainty in their industries and general environment (Hitt et al., 2010), ranging from economic crisis to global pandemic.

In late 2019, COVID-19 pandemic started to occur in China. By the end of Q1 2020, the pandemic had spread around the globe. COVID-19 impacted not only the lives of the people, but also the activities of many industrial sectors. During the pandemic, lockdowns and social distancing were imposed by the government which led to the reduction of industrial activities in many countries. The reduction of industrial activities decreases the demand for energy. According to statistical data from International Energy Agency (IEA, 2020), the demand for energy in 2020

decreased by 6 % y-o-y. Coal is one of the major global energy contributor that supplies over one-third of global electricity generation. The global demand for coal decreased by 8 % y-o-y. The decrease of coal demand pushed coal prices down. The average price of seaborne thermal coal in 2020 decreased by US\$ 17.10/t FOB Newcastle or 22 % y-o-y (Indexmundi, 2020).

Indonesia as one of major coal exporter is heavily impacted by the pandemic. The total Indonesian coal production in 2020 decreased by 53.6 million tons or 8.7 % y-o-y, while the total Indonesian coal export in 2020 decreased by 49.5 million tons or 10 % y-o-y (Indonesian Coal Mining Association Statistics, 2020). Therefore, to overcome this challenge, it is imperative for coal mining companies in Indonesia to select the appropriate competitive strategy.

Due to the relevance of above issues, researchers aim to explore Porter's competitive strategies on a company's performance. Therefore, this study will take Adaro Energy as an example to explore the impact of the company's current competitive strategy on its operational and financial performances. Adaro Energy is selected as the object of research considering that it is the second largest coal mining company by volume in Indonesia. At the same time, it is known that the COVID-19 pandemic in 2020 has brought great harm to all enterprises. Therefore, researchers also aim to understand if the competitive strategies of companies can alleviate profit loss of companies.

1.1 Objectives

The objectives of this research are formulated to be as follows:

- (1) To understand how COVID-19 Pandemic affects the operational performance of an Indonesian coal mining company
- (2) To understand how COVID-19 Pandemic affects the financial performance of an Indonesian coal mining company
- (3) To understand how competitive strategy implemented by an Indonesian coal mining company could assist the company in maintaining its performance under COVID-19 pandemic

By answering aforementioned research objectives, the research will contribute to the knowledge on how companies should respond to changing and unpredictable environment such as COVID-19 at the level of competitive strategy, which also provides a new way for companies to overcome the crisis.

2. Literature Review

2.1 Strategy

Strategy is an integral part of any enterprises to attain their long term objectives (David and David, 2017). By using an effective competitive strategy, not only a company can achieve the favorable position (Nurchahyo et al., 2018), but also learn about their customers (Porter, 1980). Porter (1985) divided the type of business strategy into three generic businesses strategies; differentiation, cost leadership and focus.

Differentiation strategy focuses its efforts on providing a unique product or service for the customers. This strategy provides high customer satisfaction and loyalty from its uniqueness. Although unique, differentiation strategy also focuses on fulfilling the customer needs and involves the customer in improving their products or services. This allows organizations to charge a premium price to capture market share. This strategy is only effectively implemented when the business provides a different and superior value to the customer through product / service quality, features, or after-sale support (Allen and Helms, 2006).

Another type of Porter's generic strategy is cost leadership. This strategy focuses on gaining competitive advantage by having the lowest cost in the industry (Porter, 1979). In order to achieve a low-cost advantage, an organization must have a low-cost leadership strategy, low-cost manufacturing, and a workforce committed to the low-cost strategy (Malburg, 2000).

The last of Porter's generic strategies is focus strategy. Implementing this strategy requires a firm to target a specific segment of the market. The firm can choose to focus on a selected customer group, product range, geographical area, or service line. Focus strategy is also based on adopting a narrow competitive scope within an industry. Focus strategy aims to grow market share through operating in a niche market or in markets either not attractive to, or overlooked by, larger competitors (Allen and Helms, 2006).

Implementing the appropriate business strategy is imperative for companies that are sensitive to future threats such as environmental uncertainty. Gupta and Govindarajan (1984) argue that environmental uncertainty is a factor that affects performance evaluation, this was supported by Bastian and Muchlish (2012). In addition, Kurniati and Nurchahyo (2018) also found that there is strong correlation between business strategy, environmental uncertainty, and financial and non-financial performances. This external factor needs to be considered to improve the strategy (Kurniati and Nurchahyo, 2018). One of the environmental uncertainties that occurred lately is COVID-19 pandemic which has been spreading rapidly and uncontrollably all over the world. COVID-19 significantly impacted many public life and

industrial sectors, thus it challenges the company's strategies that had been implemented. Constantly adaptive in rapidly changing circumstances and always seeking for strategy improvement are crucial to overcome challenging situations (Svatopluk Hlavcka, 2001) and minimize its negative impact.

2.2 Company Background

Adaro Energy is the second largest coal producer by volume in Indonesia, second to Bumi Resources. Adaro Energy is a vertically integrated energy producer in Indonesia with businesses in the coal, energy, utilities and supporting infrastructure sectors, with core business in coal mining. They are comprised of eight pillars: Adaro Mining, Adaro Services, Adaro Logistics, Adaro Power, Adaro Land, Adaro Water, Adaro Capital and Adaro Foundation. Adaro Energy sells the majority of its coal to export market and only around 20 % sold for Indonesian market. While coal remains in the core business of the company, Adaro Energy continues to develop the non-coal mining businesses to provide a more stable earnings base and to offset the volatility of the coal sector.

3. Methods

In order to comprehensively show the implementation effect of strategy on the operational and financial performance of Adaro Energy under the influence of COVID-19 pandemic, researchers analyse the operational data of Adaro Energy with aspects on coal production, sales volume, overburden removal, stripping ratio, and lost time injury frequency rate. While financial data is analysed by using the method formulated in Decree of Ministry of State Owned Company KEPMEN 100/MBU/2002 using EXCEL, where eight financial indicators that cover profitability, liquidity, activity, and solvability are used to calculate companies' financial health. Table 1 below shows the indicator of the financial performances measurements. There are four types of financial performances, such as the profitability performances, liquidity performances, activity ratio, and solvency ratio. This method is also used to categorize the performance of companies based on the rating which can be seen on Table 2, where rate AAA – A is considered healthy, rate BBB – B is considered less healthy, and CCC – C is considered unhealthy.

Table 1. List of weight measurement indicators (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

	Indicators	Weight	
		Infra	Non-Infra
Profitability	ROE	15	20
	ROI	10	15
Liquidity	Cash Ratio	3	5
	Current Ratio	4	5
Activity	Collection Period	4	5
	Inv. Turn Over	4	5
	Total Assets Turn Over	4	5
Solvability	Equity to Assets Ratio	6	10
	Total Weight	50	70

Table 2. Companies' financial health rating and category. (Decree of Ministry of State Owned Company KEPMEN 100/MBU/2002)

No	Category	Rating	Total Score (TS)
1	Healthy	AAA	TS=95
		AA	80<TS<=95
		A	65<TS<=80
2	Less Healthy	BBB	50<TS<=65
		BB	40<TS<=50
		B	30<TS<=40
3	Unhealthy	CCC	20<TS<=30
		CC	10<TS<=20
		C	TS<=10

Table 3 below shows the formula to measure the aforementioned eight financial indicators, while Table 4 – 11 show the assessment score of each ratios.

Table 3. Formula to measure eight financial indicators. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Indicators		Formula
Profitability	ROE	$(\text{Net Income}/\text{Equity}) \times 100\%$
	ROI	$(\text{EBIT} + \text{Depreciation})/(\text{Total Asset}-\text{Fixed Asset}) \times 100\%$
Liquidity	Cash Ratio	$((\text{Cash} + \text{cash equivalents})/(\text{Current Liabilities})) \times 100\%$
	Current Ratio	$(\text{Current Asset}/\text{Current Liabilities}) \times 100\%$
Activity	Collection Period	$(\text{Account Receivables}/\text{Revenue}) \times 365 \text{ days}$
	Inv. Turn Over	$(\text{Inventory}/(\text{Revenue})) \times 365 \text{ days}$
	Total Assets Turn Over	$(\text{Total Revenue}/\text{Capital Employed}) \times 100\%$
Solvability	Equity to Assets Ratio	$(\text{Total Equity}/\text{Total Assets}) \times 100\%$

Table 4. Return on Equity assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Return on Equity in Percentage (%)	Score
ROE > 15	20
$13 < \text{ROE} \leq 15$	18
$11 < \text{ROE} \leq 13$	16
$9 < \text{ROE} \leq 11$	14
$7.9 < \text{ROE} \leq 9$	12
$6.6 < \text{ROE} \leq 7.9$	10
$5.3 < \text{ROE} \leq 6.6$	8.5
$4 < \text{ROE} \leq 5.3$	7
$2.5 < \text{ROE} \leq 4$	5.5
$1 < \text{ROE} \leq 2.5$	4
$0 < \text{ROE} \leq 1$	2
ROE < 0	0

Table 5. Return on Investment assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Return on Investment in Percentage (%)	Score
ROI > 18	15
$15 < \text{ROI} \leq 18$	13.5
$13 < \text{ROI} \leq 15$	12
$12 < \text{ROI} \leq 13$	10.5
$10.5 < \text{ROI} \leq 12$	9
$9 < \text{ROI} \leq 10.5$	7.5
$7 < \text{ROI} \leq 9$	6
$5 < \text{ROI} \leq 7$	5
$3 < \text{ROI} \leq 5$	4
$1 < \text{ROI} \leq 3$	3
$0 < \text{ROI} \leq 1$	2
ROI < 0	1

Table 6. Cash Ratio assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Cash Ratio (%)	Score
Cash Ratio \geq 35	5
$25 \leq$ Cash Ratio $<$ 35	4
$15 \leq$ Cash Ratio $<$ 25	3
$10 \leq$ Cash Ratio $<$ 15	2
$5 \leq$ Cash Ratio $<$ 10	1
$0 \leq$ Cash Ratio $<$ 5	0

Table 7. Current Ratio assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Current Ratio (%)	Score
Current Ratio \geq 125	5
$110 \leq$ Cash Ratio $<$ 125	4
$100 \leq$ Cash Ratio $<$ 110	3
$95 \leq$ Cash Ratio $<$ 100	2
$90 \leq$ Cash Ratio $<$ 95	1
Current Ratio $<$ 90	0

Table 8. Inventory Turnover assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Inventory Turnover (IT in days)	Adjustment (days)	Score
IT \leq 60	IT $>$ 35	5
$60 <$ IT \leq 90	$30 <$ IT \leq 35	4.5
$90 <$ IT \leq 120	$25 <$ IT \leq 30	4
$120 <$ IT \leq 150	$20 <$ IT \leq 25	3.5
$150 <$ IT \leq 180	$15 <$ IT \leq 20	3
$180 <$ IT \leq 210	$10 <$ IT \leq 15	2.4
$210 <$ IT \leq 240	$6 <$ IT \leq 10	1.8
$240 <$ IT \leq 270	$3 <$ IT \leq 6	1.2
$270 <$ IT \leq 300	$1 <$ IT \leq 3	0.6

Table 9. Total Assets Turnover assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Total Assets Turnover (%)	Adjustment (days)	Score
TATO > 120	TATO > 20	5
105 < TATO ≤ 120	15 < TATO ≤ 20	4.5
90 < TATO ≤ 105	10 < TATO ≤ 15	4
75 < TATO ≤ 90	5 < TATO ≤ 10	3.5
60 < TATO ≤ 75	0 < TATO ≤ 5	3
40 < TATO ≤ 60	TATO ≤ 0	2.5
20 < TATO ≤ 40		2
TATO ≤ 20		1.2

Table 10. Collection Period assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Collection Period (CP in days)	Adjustment (days)	Score
CP ≤ 60	CP > 35	5
60 < CP ≤ 90	30 < CP ≤ 35	4.5
90 < CP ≤ 120	25 < CP ≤ 30	4
120 < CP ≤ 150	20 < CP ≤ 25	3.5
150 < CP ≤ 180	15 < CP ≤ 20	3
180 < CP ≤ 210	10 < CP ≤ 15	2.4
210 < CP ≤ 240	6 < CP ≤ 10	1.8
240 < CP ≤ 270	3 < IT ≤ 6	1.2

Table 11. Total Equity to Total Assets assessment score. (Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002)

Total Equity to Total Assets (%)	Score
TETA < 0	0
0 ≤ TETA < 10	4
10 ≤ TETA < 20	6
20 ≤ TETA < 30	7.25
30 ≤ TETA < 40	10
40 ≤ TETA < 50	9
50 ≤ TETA < 60	8.5
60 ≤ TETA < 70	8
70 ≤ TETA < 80	7.5
80 ≤ TETA < 90	7
90 ≤ X < 100	6.5

Lastly, after analysing both the operational and financial performances of Adaro Energy, researchers analysed the type of strategy implemented by the company and its impact to the financial and operational performances.

4. Data collection

Researchers collected the required operational data and financial data on the balance sheet items and income statement items from Adaro Energy Annual Report 2020 extracted from the company's website.

5. Results and Discussion

5.1 Operational performance of Adaro Energy

During 2016 – 2019 period, Adaro Energy generally showed increasing trend in coal production and overburden removal but decreased significantly in 2020 as shown on Table 12. The significant decrease in 2020 is attributed to the emergence of COVID-19 pandemic, the period when Adaro Energy experienced one of the most difficult years resulting from uncertainty and volatility of the global market conditions. The global coal demand declined by 8 % y-o-y (IEA, 2020). The global coal demand dropped significantly arising from the implementation of social distancing and lockdowns in many countries as an attempt to curb the spread of the COVID-19 pandemic. Those regulations resulted in the decline of coal demand for electricity generation, which ultimately caused oversupply of seaborne thermal coal. Therefore, in order to help restore balance to the coal market and to aim for better cost control, Adaro Energy reduced its coal production target by 10 % to 52 – 54 million tons. Adaro Energy's annual 2020 coal production decreased by 6 % y-o-y to 54.53 million tons, the coal sales in 2020 decreased by 9 % y-o-y to 54.14 million tons, while the total overburden stripping in 2020 decreased by 209.48 million bank cubic meters (Mbcm), or down by 23% y-o-y.

Table 12. Adaro Energy's operational statistics 2016 – 2020. (Adaro Energy Annual Report 2020)

Operational Statistics	2016	2017	2018	2019	2020
Coal Production (million tonnes)	52.6	51.79	55.05	58.03	54.53
Sales Volume (million tonnes)	54.1	51.82	54.39	59.19	54.14
Overburden Removal (million bank cubic metres)	234.1	238.7	273.38	272.09	209.48

Aside from coal production and sales, Adaro Energy recorded high safety performance in 2020. Adaro Energy recorded no fatality, and achieved LTIFR (Lost Time Injury Frequency Rates) of 0.01 out of a total working hour of 74,360,750 hours. In addition, as an attempt to curb the spread of COVID-19, the Health, Safety and Environment team enforced a number of internal initiatives and regulations, which are very important for the continuity of the whole business operations. These initiatives and regulations include the establishment of the COVID-19 handling committee, the preparation of a medical emergency response plan (MERP) and the COVID-19 surveillance system, arrangements for employee departure and return from leave / field break / off, and formulation of procedures for COVID-19 case in the operational area (Adaro Energy Annual Report 2020).

5.2 Financial performance of Adaro Energy

Similar to Adaro Energy's operational performances, Adaro Energy's financial performance was inevitably impacted by COVID-19 pandemic. The impact of COVID-19 pandemic on Adaro Energy's financial performance can be measured using the method formulated in Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002. This method can be used to measure the financial health of a company while taking account of four types of financial performances such as profitability performance, liquidity performance, activity ratio, and solvability ratio. All four types of financial ratio were measured with 8 indicators which are Return on Equity (ROE), Return on Investments (ROI), Cash Ratio, Current Ratio, Collection Period, Inventory Turnover, Total Assets Turnover, and Equity-to-Asset Ratio. The result of the calculation can be seen on Table 13.

Table 13. Adaro Energy's financial health 2016 – 2020 calculated by authors using the method formulated in Decree of Ministry of State-Owned Company KEPMEN 100/MBU/2002.

Year	2016	2017	2018	2019	2020
Total Score	56.4	63.3	59.4	59.4	46.4
Total Weight	81%	90%	85%	85%	66%
Financial Health	Grade AA (Healthy)	Grade AA (Healthy)	Grade AA (Healthy)	Grade AA (Healthy)	Grade A (Healthy)

Adaro Energy's overall financial performance in the past 5 years can be categorized as healthy with grade AA in 2016 – 2019. However, in 2020, the financial health of Adaro decreased to grade A, with total weight of 66 %. The decline of performance in 2020 was attributed to the average global coal price which decreased drastically from US\$ 77.89/ton FOB Newcastle in 2019 to US\$ 60.79/ton FOB Newcastle in 2020 or US\$ 17.10/ton decrease y-o-y (Indexmundi, 2020). While the average price of Indonesian coal decreased from US\$ 77.89/ton in 2019 to US\$ 58.17/ton or US\$ 19.72/ton decrease y-o-y (Directorate General of Mineral and Coal, 2020).

The decline on coal prices arises from oversupply of seaborne thermal coal due to the reduced global seaborne coal demand during COVID-19 pandemic. The decline of export demand significantly affected Adaro Energy's sales where export market is a majority of sales that contributes to around 80 % of Adaro Energy's total coal sales volume (Adaro Energy Annual Report, 2020). However, despite the decrease of Adaro's coal sales and production, and the decrease of global coal prices, Adaro Energy still managed to maintain strong financial performance health which is grade A.

5.3 Impact of strategy on financial and operational performance of Adaro Energy

On its operational process, Adaro Energy focused on increasing efficiency in order to achieve optimal output and lowest costs. They were achieved by optimization of the mine plan, hauling distances for both overburden and coal, and strip ratios, while taking into account the preservation of reserves and geotechnical aspects, as well as the coal supply chain by strengthening communication networks, and increasing the unit's effective working hours production. To further generate low-cost operation, Adaro Energy implements vertical integration business model which integrate pit to power through its subsidiaries including coal mining, service and logistics, and power. This business model allows for control in the entire coal supply chain and enable Adaro Energy to respond quickly to ever-changing environment. This business model succeeds in differentiating Adaro Energy itself from other mining company. According to Porter (1985), increasing profits by reducing costs, while charging industry-average prices can be classified as cost leadership strategy. Therefore, based on information on Adaro Energy's operational strategy and literature, we can infer that Adaro Energy adopts cost leadership strategy.

During the COVID-19 pandemic, Adaro Energy ensures the continuation of its operational activities by enforcing a number of internal initiatives and regulations, including the establishment of the COVID-19 handling committee, the preparation of a medical emergency response plan (MERP) and the COVID-19 surveillance system, arrangements for employee departure and return from leave / field break / off, and formulation of procedures for COVID-19 case in the operational area (Adaro Energy Annual Report 2020). Adaro Energy also attempted to help restore balance to the coal market and to aim for better cost control, by reducing its coal production target by 10 % and total overburden removal in 2020 by 23 % y-o-y. This is in line with Indonesian government's strategy to reduce Indonesian annual coal production in 2020. Despite those attempts, COVID-19 pandemic still negatively impacts Adaro Energy's financial performance, which result in the decline of the company's financial health from 85 % in 2019 to 66 % in 2020. However, due to Adaro Energy's cost leadership strategy, the decline of the company's financial health is not as severe and Adaro Energy still managed to maintain healthy balance sheet, which is shown by Adaro's financial performance health as grade A.

6. Conclusion

In 2020, to Adaro Energy reduced its coal production target by 10 % to 52 – 54 million tons. Adaro Energy's annual coal production in 2020 decreased by 6 % y-o-y to 54.53 million tons, coal sales in 2020 decreased by 9% y-o-y to 54.14 million tons, and total overburden removal in 2020 decreased by 23% y-o-y. They are in line with the company's guidance to lower the company's ratio to better cost control under challenging situations arising from the COVID-19 pandemic. The company's Health, Safety and Environmental team also implemented a number of internal initiatives and regulations in order to curb the spread of COVID-19 which is critical to business continuity. Adaro Energy recorded a high safety performance in 2020. Adaro Energy recorded no fatalities, and achieved LTIFR (Lost Time Injury Frequency Rates) of 0.01, out of a total of 74,360,750 hours of working hours.

The financial performance of Adaro Energy which was also affected by the COVID-19 pandemic can be measured by the method formulated in the Decree of the Ministry of State-Owned Enterprises KEPMEN 100/MBU/2002. The result shows that Adaro Energy's performance in 2016 – 2019 can be categorized as healthy with AA grade and decreased in 2020 to grade A with total weight of 66. The decrease of Adaro Energy's financial health in 2020 is primarily caused by the decline of average global thermal coal prices by US\$ 17.10/ton (Indexmundi, 2020) and average Indonesian thermal coal prices by US\$ 19.72/ton (Directorate General of Mineral and Coal, 2020) y-o-y. The price decline was attributed to the decrease in global coal demand in the midst of the COVID-19 pandemic.

Despite the global price decline, Adaro Energy still managed to maintain grade A of financial performance health, which is considered as healthy.

On its operational process, Adaro Energy implements cost leadership strategy, which is shown by Adaro Energy's vertical integration business model that integrates pit to power through its subsidiaries including coal mining, services and logistics, and power. This business model allows for control in the entire coal supply chain and respond quickly to ever-changing environment. Adaro Energy also focuses in improving efficiency to achieve optimal output and lowest costs by optimizing from various aspects. It can be concluded that the cost leadership strategy that was implemented by Adaro Energy assisted the company in maintaining its performance under challenging environment which is shown in Adaro Energy's healthy financial performance even during the COVID-19 pandemic.

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Biography

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