

Retailing Beyond Fuel: The Teaching Case Study of PTTOR's Aviation Fuel Market During the COVID-19 Pandemic

Vesarach Aumeboonsuke*

Received: April 18, 2022 Revised: October 9, 2022 Accepted: October 20, 2022

Abstract

On April 7, 2021, in the aftermath of the very first of an annual shareholder meeting of PTT Oil and Retail Business Public Company Limited (“PTTOR”), Mr. Pattra (hypothetical name), Risk and Planning Division, was asked by the Vice President, Mr. Nopporn P., to prepare an expansion plan, with which to fulfill the commitments that the President team had made to the shareholders at the OR annual shareholder meeting. Since the PTTOR's IPO on 11 February 2021, this was the first time of the annual shareholder meeting and it had been a contentious one, with the major shareholders having expressed concern with the challenges from the COVID-19 pandemic and the Government Policy Responses and Measures toward to COVID-19 on the Company's performance during the year 2020 and the first quarter of the year 2021. They voiced for immediate and responsive actions by the management team to improve the Company's performance and to ensure that the Company would be resilient and be able to get through the challenges faced during the COVID-19 crisis.

In response to the shareholder meeting, the President had indicated that he was going to call for the internal meeting with all the Vice Presidents and discuss about the strategies to cope with the PTTOR's performance that had been seriously affected by the COVID-19. At the internal meeting, the President and the Vice Presidents

* International College, National Institute of Development Administration
148 Serithai Road, Klong-Chan, Bangkok 10240, THAILAND.
E-mail: vesarach@gmail.com

had investigated that the major adversity resulted from the intense competition in the oil business, the global economic recession, and the sharp decline in oil demand especially on the aviation oil that were affected by the closure of airports, disoperation of airlines business, and the government responses measures related to travel restrictions.

By the end of the meeting, the Vice President of Aviation Oil Market has assigned Mr. Pattra to be responsible for conducting the strategic plan including management of concentration risk in order to stabilize the company's financial performance during the COVID-19 pandemic and projected challenges from penetration plan to European markets. The Risk and Planning Division finds himself genuinely content that he has been entrusted with this significant task by the Vice President. Though he realizes that there is much to be done, and in a relatively short time frame. He is going to prepare this specific expansion plan and to make a presentation to the Vice President at the next scheduled meeting by the end of next week. Therefore, Mr. Pattra determines to get started right away.

Keywords: Multinational corporation; PTTOR; International Expansion;
Geographical diversification

กรณีศึกษาปตท. น้ำมันและการค้าปลีก จำกัด (มหาชน) กับการดำเนินธุรกิจน้ำมันอากาศยานภายใต้ภาวะวิกฤตโควิด

เวสารัช เอี่ยมบุญสุข*

รับวันที่ 18 เมษายน 2565 ส่งแก้ไขวันที่ 9 ตุลาคม 2565 ตอปรับตีพิมพ์วันที่ 20 ตุลาคม 2565

เมื่อวันที่ 7 เมษายน พ.ศ. 2564 ภายหลังการประชุมผู้ถือหุ้นประจำปีครั้งแรกของบริษัท ปตท. น้ำมันและการค้าปลีก จำกัด (มหาชน) (“PTTOR”) คุณภัทร (ชื่อสมมติ) ฝ่ายความเสี่ยง และการวางแผน ถูกตั้งคำถามโดย รองกรรมการผู้จัดการ นายณพพร เพื่อเตรียมขยายแผนงาน เพื่อบรรลุพันธกิจที่ประธานคณะผู้บริหารได้ให้ไว้กับผู้ถือหุ้นในการประชุมผู้ถือหุ้นประจำปีของ OR นับตั้งแต่การเสนอขายหุ้น IPO เมื่อวันที่ 11 กุมภาพันธ์ พ.ศ. 2564 นับเป็นครั้งแรกของการประชุมผู้ถือหุ้นประจำปีและเป็นประเด็นถกเถียงที่ผู้ถือหุ้นรายใหญ่ได้แสดงความกังวลเกี่ยวกับ ความท้าทายจากการแพร่ระบาดของโควิด-19 และการตอบสนองต่อนโยบายและมาตรการของรัฐบาล สู่สถานการณ์โควิด-19 ในผลการดำเนินงานของบริษัทในช่วงปี 2563 และไตรมาสแรก ของปี 2564 โดยได้ประกาศให้ฝ่ายจัดการดำเนินการในทันที เพื่อปรับปรุงผลการดำเนินงานของบริษัทและเพื่อให้ มั่นใจว่าบริษัทจะมีความยืดหยุ่นและสามารถ ผ่านพ้นวิกฤตการณ์ COVID-19 ไปได้

กรรมการผู้จัดการใหญ่ได้แจ้งในการประชุมผู้ถือหุ้นว่าจะเรียกประชุมภายในกับรองประธาน ทั้งหมด และหารือเกี่ยวกับกลยุทธ์ในการรับมือกับผลการดำเนินงานของ PTTOR ที่ได้รับผลกระทบ จากโควิด-19 อย่างร้ายแรง ในการประชุมภายใน ฝ่ายบริหารได้ข้อสรุปว่า อุปสรรคสำคัญเกิดจาก การแข่งขันที่รุนแรงในธุรกิจน้ำมัน ภาวะเศรษฐกิจถดถอยทั่วโลกและความต้องการใช้น้ำมันที่ลดลง อย่างมาก โดยเฉพาะน้ำมันอากาศยานที่ได้รับผลกระทบจากการปิดสนามบิน การล่มสลายของ ธุรกิจสายการบิน และมาตรการตอบโต้ของรัฐบาลที่เกี่ยวข้องกับการจำกัดการเดินทาง

* วิทยาลัยนานาชาติ สถาบันบัณฑิตพัฒนบริหารศาสตร์

เลขที่ 148 ถนนเสรีไทย แขวงคลองจั่น เขตบางกะปิ กรุงเทพมหานคร 10240

อีเมล: vesarach@gmail.com

เมื่อสิ้นสุดการประชุม รองประธานฝ่ายตลาดน้ำมันอากาศยานได้มอบหมายให้นายภัทร รับผิดชอบในการดำเนินการตามแผนยุทธศาสตร์รวมถึงการบริหารความเสี่ยงด้าน concentration risk เพื่อรักษาเสถียรภาพทางการเงินของบริษัทในช่วงการระบาดของไวรัสโควิด-19 และคาดการณ์ความท้าทายจากแผนการเข้าสู่ตลาดยุโรป แม้ว่าเขาจะรู้ว่านี่เป็นภาระงานที่สำคัญและมีรายละเอียดมากมายที่ต้องทำให้สำเร็จในกรอบเวลาอันสั้น แต่นายภัทรรู้สึกเป็นเกียรติอย่างยิ่งที่ได้รับมอบหมายให้รับผิดชอบหน้าที่สำคัญนี้ เขาจึงตั้งใจที่จะเริ่มต้นทันทีเพื่อจะเตรียมแผนการขยายตลาดนี้และ นำเสนอต่อรองประธานในการประชุมผู้บริหารครั้งต่อไปภายในสิ้นสัปดาห์หน้า

คำสำคัญ: บริษัทข้ามชาติ ปตท น้ำมันและการค้าปลีก การขยายธุรกิจสู่ตลาดต่างประเทศ

“...with the current COVID-19 crisis, ever-changing technological transformation and rapid changes of consumer behavior, OR is facing a great challenge across all its business sectors. As a leader of Thailand’s oil and retail businesses, OR is relentlessly adjusting its portfolio to make greater strides beyond the conventional oil business by employing its unique “Retailing Beyond Fuel” business model to better serve customers’ needs in terms of mobility and future lifestyles .”

Message from the Board of Director, PTTOR’s Annual Report 2020, p.33.

It was during the first annual shareholder meeting of PTT Oil and Retail Business Public Company Limited (“PTTOR”) on April 7, 2021 since its shares were publicly traded in the Stock Exchange of Thailand (SET) from February 11, 2021. The Initial Public Offerings (IPOs) of PTTOR has gained such attention from both institutional and individual investors that its first day price was closed at 29.25 THB (from the IPO price of 18.00 THB). Consequently, the price continually rallied up to 36.50 THB a few days later, resulted in a double profit trading. However, during the past month before the date of its first annual shareholder meeting, the share price had fallen by 15 percent and closed at 31.75 THB on the day before its significant meeting. This was a market reflection on much concern regarding the fate of Aviation Fuel market that had been severely impacted by the policy responses toward the COVID-19 pandemic since its first discovery in December 2019 in China.

This Teaching case was written by Assoc.Prof. Vesarach Aumeboonsuke, Ph.D., Lecturer of finance in the International College of the National Institute of Development Administration (Thailand). Vesarach.a@nida.ac.th. It is intended for the use of instructors who have obtained permission to use the case study, “Retailing Beyond Fuel: The Teaching Case Study of PTTOR’s Aviation Fuel Market during the COVID-19 Pandemic.” NIDA Cases and Teaching Notes are developed solely as the basis for class discussion, and are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective administrative or managerial practice. Copyright © 2022 National Institute of Development Administration and Assoc.Prof. Vesarach Aumeboonsuke, Ph.D.

To order copies or request permission to reproduce materials, call 02-727-3935 or e-mail address: XXXX. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means – electronic, mechanical, photocopying, recording, or otherwise – without the permission of the National Institute of Development Administration.

With only one month after the COVID-19 initiation, it had been spreading worldwide and been declared as a global pandemic and a public health emergency of international concern (PHEIC), which was the WHO's highest level of alarm under international law (World Health Organization, 2020). Amid the COVID-19 impacts, the global and local (Thai) aviation fuel market had been adversely distressed and in particular, it caused 90 percent decline in aviation fuel revenue of PTTOR. Perceiving the situation as apparent evidence that illustrated the risk of market concentration, management team had been discussing about the plan to manage PTTOR concentration risk by geographically diversifying into the European market.

The situation has triggered the Vice President to assign task on risk management plan to the Risk and Planning Division, Mr. Pattru to prepare the report and the presentation on the alternative response actions that the PTTOR could exercise. In specific, the task is expected to include concentration risk, country's attractiveness and risk analysis, and the international market penetration opportunities and challenges. The report and presentation are expected to be delivered during the internal management meeting scheduled in the upcoming week.

PTT Oil and Retail Business Public Company Limited : Overview & Developmental Highlights

“Retailing beyond fuel - OR uplifts the petrol station experience to be “more than just a petrol station” for consumers by engaging a variety of retail business to fulfill every need for every lifestyle .”

Message from the Board of Director, PTTOR's Annual Report 2020, p. 23.

PTT Oil and Retail Business Public Company Limited (“PTTOR”) was a PTT Group flagship company operating the oil and retail businesses in domestic and international markets radiating from its home base in Bangkok, Thailand to its neighborhood countries in continental Southeast and East Asia including Lao P.D.R., Cambodia, Philippines, Myanmar, Singapore, and China (See Exhibit 1: PTTOR International Business). Initially, PTTOR was the core business of PTT PLC established on

December 29, 1978 under the Petroleum Authority of Thailand Act B.E. 2521 (1987) to operate petroleum and other related businesses with the aim to solve the second world crisis of petroleum shortages (See Exhibit 2: The 1978 – 2020 Developmental Highlights of PTT & PTTOR). Later, PTT was corporatized into a public company limited under the Corporatization Act B.E. 2542 (1999) with registered capital of 20 billion THB. in the Stock Exchange of Thailand on December 6, 2001, while maintaining the status as a state enterprise under the supervision of the Ministry of Energy. Over the course of decades, the Oil Business under PTT PLC expanded rapidly, and continuously created value through business chain ranged from upstream, intermediate, downstream, to end customers (See Table 1: The Oil Business in PTT’s Business Value Chain)

Table 1: The Oil and Retail Business in PTT’s Business Value Chain

PTT PLC	Upstream	Intermediate	Downstream	End customers
Oil Business	Crude Oil	Logistics, Refineries	Oil, LPG, Lube Base Plant	PTT stations,
	Procurement, Trading			Transportation, Household, Lubricant
Gas Chain	Exploration and Production	Gas Separation and Plants	Industry	District Cooling System
Infrastructure Business	Natural Gas,	Gas Transmission Pipeline	Power Plants, NGV	Electricity
	Crude and Petroleum Products			

Table 1: The Oil and Retail Business in PTT's Business Value Chain (Continue)

PTT PLC	Upstream	Intermediate	Downstream	End customers
Petrochemical Chain	Olefins and Aromatics Plants	Petrochemical Intermediate Plants	Plastic and Bio-Plastic Resins	End Product, Export Market
New Business	Coal Mining	Biodiesel Plants and Ethanol Plants, Asset Management and Facility Management	Sustainability Management/Consultancy, Engineering and Project Management	Gasohol (E10, E20, E85), Biodiesel (B7)
Oil Business	Crude Oil Procurement, Trading	Logistics, Refineries	Oil, LPG, Lube Base Plant	PTT stations, Transportation, Household, Lubricant

Sources: <https://ptt.listedcompany.com/misc/factsheet/20210319-ptt-factsheet-2020.pdf>
(Access date: December 9, 2021)

PTT Oil Business operated oil distribution covering petroleum products (fuel oil and LPG), lubricants, and retail business in Thailand and overseas. There were three customer segments, which could be categorized into:

1) Commercial Business (B2B) including corporate customers, public sector (government agencies and state enterprises) and the private organizations who purchased petroleum products for their internal uses,

2) Supply Sales who were oil sellers or vendors, and

3) Retail Business (B2C) including consumers and gas station operators through its nationwide network of over 1,300 gas stations. Its retail businesses also covered Café Amazon, PTT Fit Auto car care service, LPG (cooking gas) retailers, and lubricant

retailers. By the year 2015, the company operated 8 Petroleum Oil Terminals, 15 LPG Terminals, and 14 Aviation Fuel Terminals/Stations across Thailand. (See Exhibit 3: Petroleum Terminals and Aviation Fuel Station Map). PTT Oil and Trading Business generated the biggest proportion of revenues to PTT PLC. Revenue from oil business comes from marketing margins of diesel oil, jet oil, and gasoline.

To enhance the potential competitive advantage and flexibility of its Oil and Retail Business during the wake of intensified market competition, on July 1, 2018, PTT restructured its organization and transferred all businesses under its Oil Business Unit, including the shares of related companies, to PTT Oil and Retail Business Public Company Limited (PTTOR). Since then, PTTOR continued to grow and build its own accomplishments. 2018 marked a good year for PTTOR business outlook being the leader in the oil industry due to rise in oil price based on global economic growth and China's control of commodities supply (see Exhibit 4: PTTOR's market share in the year 2019-2020). During the year 2020, PTTOR expanded its business into various segments through activities including (1) a partnership with Flash Incorporation Co., Ltd. ("Flash") to explore business opportunities in the mobility and lifestyle ecosystems, where Flash provides express delivery and integrated e-commerce business under the brand "Flash Express", (2) an international expansion of Café Amazon in Vietnam through a joint venture with Central Group, and (3) an investment in Peaberry Thai Company Limited not only to support the operation of Café Amazon outlets as this new company will source raw material, procure equipment, and provide equipment maintenance service to Café Amazon but also to open up an opportunity to enter the specialty coffee market through the Pacamara brand.

As of December 31, 2020, PTTOR operated 2,367 gas stations, 3,729 Café Amazon outlets, 2,118 convenience store (Jiffy and 7-Eleven) outlets in the domestic and international markets. In addition, retail business also comprised restaurants where it had bought the right in expanding businesses including Hua Seng Hong (only dim sum products), Daddy Dough, and Texas Chicken. (See Table 2: Portfolio of the PTT's Business Value Chain).

Table 2: Portfolio of the PTTOR's Business Value Chain

	Total	Oil	Non-Oil	International	Other
	Million THB	Business	Business	Business	Business
Revenue	428,804	90.9%	3.9%	4.9%	0.3%
EBITDA	17,619	68.9%	25.5%	4.9%	0.7%

Sources: PTTOR's Annual Report 2020, p. 23

Table 2 illustrates that most of PTTOR's revenues (90.9 percent) came from their oil business. In this business area, PTTOR supplied gasoline, diesel, liquefied petroleum gas (LPG), lubricants, kerosene, and several other products at over 1,900 PTT Stations operated across Thailand, which were enriched by retail businesses like a convenience store, a Café Amazon coffee shop, an eatery, or a car care service under the concept of Living Community which were also operated by PTTOR. Additionally, PTTOR distributed different oil-based products like fuel or lubricant to over 2,000 customers including aviation, marine, and industrial customers, as well as government agencies and they were also offering different consultations as an Energy Solution Provider. The second source of their revenues (4.9 percent) was generated in their international business. This business comprised a network of 337 retail fuel service stations, 5 FIT Auto service stations, 265 Café Amazon outlets and 95 Jiffy convenience stores across the Philippines, Cambodia and Laos. The third source of revenues (3.4 percent) was generated with PTTOR's non-oil business. This included the previously mentioned retail businesses. In this area, the company's network consisted of Café Amazon outlets, the Thailand's largest café chain, food and beverage outlets, and convenience stores. In this context, the Café Amazon outlets offer coffee and other refreshments, bakery products and light meals, the beverage outlets offer light meals and beverages, under the licensed brands "Texas Chicken", "Hua Seng Hong Dim Sum" and "Pearly Tea". Lastly, under the brands "Jiffy" and "7-Eleven" a variety of food, beverages and basic goods are offered. Furthermore, PTTOR also provides space management services, comprising leasing and other services, which allow other brands and business to operate their business in locations managed by PTTOR. Due to this business carrying an operating profit margin of nearly 20 percent

(compared to 1-2 percent for oil sales), PTTOR had been planning to expand this business area by investing 74 billion THB during the following five years (2022-2026), which also included buying a 20 percent stake in an organic food restaurant, Ohkajhu, for 500 million THB and a partnership with a food delivery platform Line Man Wongnai (Reuters, 2021). This long-term plan also included an overseas expansion to triple the number of overseas shops in its Cafe Amazon coffee chain to 1,000 by 2025 (Asia.Nikkei, 2021).

After the split from PTT PLC, PTTOR distributes a wide variety of products to customers in various segments including aviation, marine, industrial customers, and government agencies. Oil Business became the major contribution to the PTTOR revenue. Aviation fuel business group expanded to neighboring countries including Cambodia, Philippines, and Hong Kong.

PTTOR in the Aviation Fuel Industry

PTTOR had been distributing premium aviation fuels since 1975. It had been the aviation fuel supplier to more than 60 leading commercial airlines worldwide under strict adherence to the JIG Standards (Joint Inspection Group standards for aviation fuel quality control and operating procedures). PTTOR replete product logistics system and its efficiency, whether piped, trucked, shipped or 200-liter tanked. PTTOR also offers over 60 aviation fueling vehicles, including dispensers, refuelers, and trailers, covering over 15 domestic airports and over 100 airports in 15 countries via its cooperation with leading local companies.

Aviation Fuel Market in Thailand

Aviation fuel was produced and provided by the oil and gas industry, which strongly depends on the aviation industry. The top 3 oil and gas companies that provided aviation fuel in the Thai market were: Exxonmobil, PTTOR, and Bangchak. PTTOR was leading with an oil market share of 37.23 percent, Exxonmobil which belongs to Esso had an oil market share of 10.74 percent and Bangchack had a market share of 10.10 percent (Mordor Intelligence, 2021). The main customers who consumed aviation fuel were the Airforce, airports, and civil aviation.

The oil corporations worked with the fuel in service provider BAFS (Bangkok Aviation Fuel Services) and they supplied Jet A-1 to all airlines that fly out of Suvarnabhumi, Don Mueang, Samui, Sukhothai, and Trat Airports. The into-plane service cost was included in the Into-wing Contract when the oil firm formed a fuel contract with the airline.

Due to the COVID-19 pandemic, the overall market value of the oil and gas industry had been declined by 39.9 percent (MarketLine, 2021). As a result of the decrease, the crude oil prices started to drop and since Thailand's reserve on crude oil was also in deficiency, the import of crude oil started to increase (Mordor Intelligence, 2021). The most affected part of the oil and gas industry was the aviation fuel, which was due to the impact the covid-19 restrictions on the aviation industry.

Impact of the COVID-19 on the Aviation Market

As the COVID-19 pandemic had globally affected the economy, it had negatively impacted the travel market, which had also inflicted the aviation industry. The impact of the pandemic on the aviation industry was shown in the following table in terms of the decreasing rates of the passengers' seats globally in 2020 compared to the year 2019. (See Table 3: Decline in Passenger Seats Globally in 2020 compared to 2019).

Table 3: Decline in Passenger Seats Globally in 2020 compared to 2019

Number of Passenger Seats	World	Asia Pacific
Total	-50%	-45%
International	-55% - 64%	-71.9% - 77.5%
Domestic	-18% - 23%	-12.9% - 16.2%

Sources: State of Thai Aviation Industry 2020, The Civil Aviation Authority of Thailand, 2021, p.3

As shown in the table, there was a decline of 50 percent of the world's passengers' seats and a decline of 18-23 percent of passengers' seats for Thailand. Table 3 illustrates how worldwide and domestic travel restrictions have resulted in significant cutbacks in the aviation industry. In 2020, there were 64.7 percent fewer passengers than the previous year, with international passengers falling by 81.7 percent and domestic passengers falling by 44.9 percent. The total number of flights dropped by 53.1 percent, with international flights falling by 73.9 percent and domestic flights falling by 33.8 percent. Thailand's Airfreight was also affected, even though there have been no restrictions on airfreight transportation. The reason why there have been declines was that the airfreight transport of Thailand operates with passenger's flights instead of freighters (see Table 4: The Statistics of Thailand's Air Transport in 2020 compared to 2019).

Table 4: The Statistics of Thailand's Air Transport in 2020 compared to 2019

Air Transport	Passenger		Flight		Freight	
	Million	%	Number	%	Ton	%
Total	58.25	-64.7%	500,435	-53.1%	954,377	-36.0%
International	16.25	-81.7%	133,940	-73.9%	922,163	-34.7%
Domestic	81.70	-44.9%	366,495	-33.8%	32,214	-58.6%

Source: State of Thai Aviation Industry 2020, The Civil Aviation Authority of Thailand, 2021, p.4

As a result, the demand for aviation fuel has declined the most, for about 54 percent, in comparison to gasoline, which decreased by 11.4 percent, and petrol by 0.2 percent. Furthermore, as illustrated in Figure 1, the Jet fuel prices started to decline, with the EIA predicting that global oil demand would only return to pre-pandemic levels in 2022. According to the Thai Energy Policy and Planning Office, aviation fuel consumption would average 8-11 million gallons per day in 2021, up from 7.3 million litres per day in 2020. According to Krungsri Research, commercial demand for jet fuel would progressively increase to 19-20 million litres per day by 2023, the level before the first COVID-19 outbreak (Krungsri, 2021). Moreover, to help the aviation industry the government has approved a jet fuel tax reduction and in 2020 the prices of jet fuel had reached record lows as seen in Figure 1.

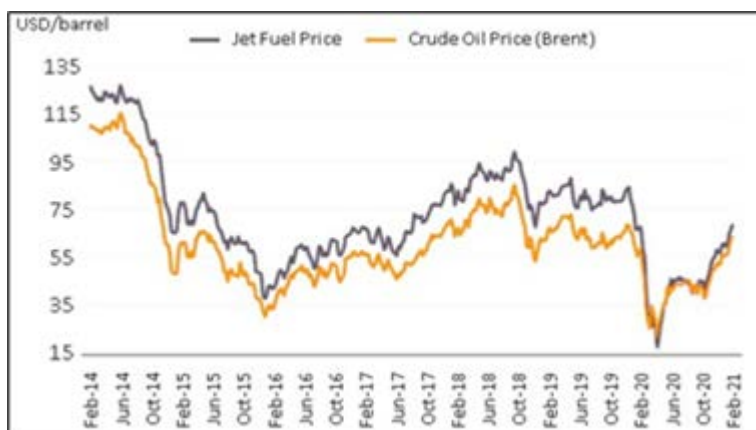


Figure 1: Decline in Jet Fuel Prices

Sources: Krungsri.com

To sum up, the pandemic had a heavy toll on the aviation industry and the aviation fuel market. Therefore, the prospects of a recovery for the industry are tied with the measures of getting the pandemic under control

Impact of the COVID-19 Pandemic on the Aviation Fuel Market

Since 2009 global fuel consumption by commercial airlines was increasing each year, reaching an all-time high of 95 billion gallons in 2019. The pandemic has reduced fuel consumption to 52 billion gallons in 2020 and increased to 57 billion gallons in 2021 (Statista, 2021). As can be seen in Figure 2, there was a slump in demand for gasoline of more than 50 percent in March 2020, due to the outbreak of the pandemic. It could also be seen that demand in China has recovered more quickly than in Europe or the USA. (See Figure 2: Decline of Jet Fuel Sales Volume During the Year 2020).

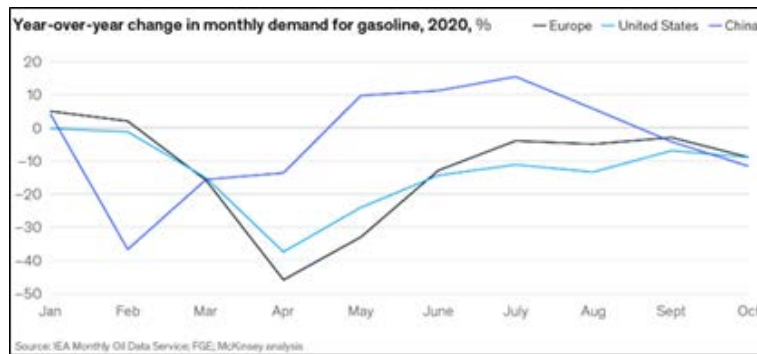


Figure2: Decline of Jet Fuel Sales Volume During the Year 2020

Source: McKinsey.com

The reduction in passenger flights in 2020 by about 75 percent compared to 2019, came from the lockdowns imposed by many countries and the attempt to contain the virus and the share of global air cargo capacity remained unbalanced (Statista, 2021). Globally, jet fuel consumption for commercial passenger flights decreased by 0.7 million barrels per day between February and March 2020, before increasing to 2.4 million barrels per day between March and April. It recovered by only 0.1 million barrels per day in May and 0.3 million barrel per day in June 2020 (Daily Energy Insider, 2020).

The third wave of COVID-19 hit Thailand hard, worsening the situation for airlines as passenger volume fell from 35.5 percent to 27.8 percent, according to the Civil Aviation Authority of Thailand (CAAT). As Thailand was particularly dependent on tourism, the country was one of the hardest-hit markets, with seat capacity at 13 percent of pre-pandemic levels (Bloomberg, 2021). The aviation and the tourist industry also played a major role in Thailand's economic growth. The jobs and expenditure generated by airlines and their supply chain, the flows of trade, tourism, and investment generated by users of all airlines servicing the country, and the city pair linkages that enable these flows were the three ways that the aviation business impacts the economy (IATA, 2017). The Thai aviation market had a compound annual growth of 11.4 percent with an average annual growth rate of international passengers of 10.8 percent and an average annual growth rate of domestic passengers of 12.1 percent from 2010 up until 2019 (The Civil Aviation Authority of

Thailand, 2019). Crude oil prices have fallen from 67.3 USD per barrel late last year to 23.4 USD per barrel in the first quarter of 2020 due to the oil price war between the Organization of Petroleum Exporting Countries and Russia and oversupply (PTTOR, 2021; Reuters, 2020).

Impact of the COVID-19 Pandemic on PTTOR

Due to the sharp drop in oil prices and the decline in demand for petrochemicals, which has led to heavy losses, PTTOR PCL, Thailand's largest energy company, planned to cut back its domestic investments by 15 percent and postpone investments that were not a priority. For the first quarter in 2020, the company reported a loss of 1.55 billion THB (48.2 million USD). This represented the first loss in four years, as the same period last year saw a profit of 29.3 billion THB (Reuters, 2020). Also, PTTOR announced that oil and fuel sales fell by 10 percent due to the mobility restrictions imposed by COVID-19 (Thai Enquirer, 2021). The refinery's operating profit has decreased by 35.7 billion THB from inventory loss as a result of the oil price decline. (See Table 5: PTTOR's Financial Performance during the year 2019-2020).

Table 5: PTTOR's Financial Performance during the year 2019-2020

	Unit	2019	2020	Variance
Sales	Million THB	577,134	428,804	-25.7%
EBITDA	Million THB	17,005	17,619	+3.6%
Net Profit	Million THB	10,896	8,791	-19.3%
Earnings per Share	THB	1.21	0.98	-19.0%
Return on Equity	Percent	32.7	22.9	-30.0%
Return on Assets	Percent	7.3	5.9	-19.2%
Debt to Equity	Times	0.7	1.1	+57.14%
Paid up Share	Million Shares	9,000	9,000	

Source: PTTOR's Annual Report 2020, p. 22

Accordingly, PTTOR planned to reduce the production of jet fuel and produce diesel fuel as the demand for it has only slightly decreased, and expected the refinery utilization rate to reach 90 to 100 percent in 2020 (Reuters, 2020). For 2021, PTTOR has reduced its business expansion targets as the third wave outbreak wreaks havoc on the economy and reduced demand for both the oil and non-oil sectors. Analysts at KGI Securities estimated OR's oil and fuel sales for the full year 2021 at 22.8 billion litres, down from 24.4 billion litres in the previous year, and forecast an annual profit of 11.7 billion THB (Thai Enquirer, 2021). Going forward, PTTOR was laying out a five-year, 180.8-billion-THB investment plan that would expand its gas business. In addition, 203.5 billion THB of preliminary investments were flowing into liquefied natural gas and gas-to-power projects (Reuters, 2020).

The decline in PTTOR's performance during the year 2019-2020 was primarily attributed to the sharp decrease in global petroleum product prices, the continuation of price war between the OPEC and Russia that pulled up global oil supply simultaneously with an unexpected plummet in global demand for petroleum products due to the COVID-19 pandemic, and the decline in domestic demand as a result of the government response policies to COVID-19 pandemic in Thailand including the quarantines, closure orders, curfews, and widespread travel restrictions. Jet fuel was seriously affected the most by sharp drop in air travels and international flight restrictions. Moreover, the non-oil business also experienced, although not as much as the oil business, a slight reduction in sales from convenience stores (see Table 6: PTTOR's Sales Growth Categorized by Business and Table 7: Performance of the Top Four Oil Business Segments).

Table 6: PTTOR's Sales Growth Categorized by Business

Unit: THB Million	2019	2020	Variance
Total Sales	577,134	428,804	-25.7%
Oil	539,835	396,708	-26.5%
Non-Oil	17,016	16,867	-0.9%
International	33,656	21,361	-36.5%
Other	1,715	1,609	-6.2%

Source: PTTOR's Annual Report 2020, p. 22

Table7: Performance of the Top Four Oil Business Segments

Unit: THB Million	2019	2020
Total Volume Sold	27,627	24,400
Diesel	40.2%	46.3%
Gasoline	21.4%	24.7%
Aviation Fuel	15.8%	7.2%
LPG	14.7%	14.0%

Source: PTTOR's Annual Report 2020, p. 135

Table 7 illustrates the proportion of the total volume sold on the top four oil business segments. It can be seen that there was a drop in the total volume sold. However, there was an alteration in the proportion of each oil product. Diesel and gasoline, the top two oil business segments have gained higher proportion in the year 2020, compared to their proportion in the year 2019. LPG experienced merely slight decline. While Aviation fuel had experience the most adverse impact from the COVID-19 pandemic as evidenced by the huge loss of its volume sold proportion, from almost 16% down to only 7% approximately, causing it to fall in the volume sold proportion from the third rank to the fourth rank (See Exhibit 5: PTTOR's Financial Summary during the year 2019-2020).

Based on the empirical evidences and the above information, it could be concluded that there were several risk factors that PTTOR had experienced during the unexpected event of the COVID-19 pandemic including the fluctuation in fuel price, the sharp decline in aviation fuel demand, the travel restrictions, and the unforeseeable economic recovery that resulted in its disappointing operating and financial performance during the year 2020. Therefore, it was essential that PTTOR closely monitored its risk factors and employed an effective risk management practice.

Risk Management of PTTOR

PTTOR established the Enterprise Risk Management Committee (ERMC) to engage in risk management in order to achieve sustainable growth and to maintain the confidence of shareholders and all groups of stakeholders. ERMC was responsible for several key activities including:

1. providing opinions on and approvals of the company's annual risk management plan, ensuring its consistency with strategic directions, business plans, and key indicators.
2. providing opinions on new investment projects/ large-scale investment projects that presented significant risks to the company.
3. closely monitoring the company's risk management during the COVID-19 pandemic and proposing proactive management to prevent the escalation of risks into issues.

Essentially, an apparent evidence at the current situation demonstrated that the above three key activities of the ERM were vital to PTTOR's sustainable growth and its prospects for the year 2022. Consequently, the top management had been preparing for its strategic plan with the aim to manage its concentration risk by having a risk diversification in terms of geographic expansion and variety in its business segments. In specific, the management team had been discussing on the concentration risk management plan by geographically diversifying into the European market. Although this long-term expansion plan had been prolonged on shelf for a length of time, the management was still indecisive on which country in the European market would be more opportune for PTTOR's penetration. This circumstance has prompted the Vice President to assign task on the concentration risk management plan to the Risk and Planning Division, Mr. Pattrra to develop the report and the presentation on the alternative response actions that the PTTOR could exercise. In specific, the task is expected to include the European market expansion plan, starting with a country screening process, an analysis on country's attractiveness, and the international market penetration opportunities and challenges. The report and presentation are expected to be delivered during the internal management meeting scheduled in the upcoming week.

A Pertinent Time to Pull Off

With an ongoing burden from the shareholders' expectation toward PTTOR operating and financial performance for the upcoming year, the president had made unequivocal when he appointed Mr. Pattra to formulate the scheme of work on the international market expansion plan and conduct an investigation on the country risk analysis and attractiveness, and the anticipating opportunities and challenges. the analysis was an urging priority since the concentration risk utterly contributed to PTTOR's operating and financial performance during the year 2020. If the expansion was to be successful, the longer time it was deferred, the higher opportunity cost from concentration risk that PTTOR had to bear with. Mr. Pattra had to propose an optimum country based on his analysis on country screening and country's attractiveness, together with the anticipated opportunities and challenges before the upcoming Board Meeting on April 14, 2021.

Addendum of Exhibits

Exhibit 1: PTTOR International Business

PTT (LAO) Co.,LTD., Lao P.D.R. Website : www.pttlao.com

PTT (Cambodia) Limited, Cambodia. Website : www.pttcambodia.com

PTT Philippines Corporation, Makati City, Philippines. Website : www.pttphilippines.com

Brighter Energy Company Limited, Myanmar. Email : info@brighterpttor.com

PTTOR Singapore Private Limited, Singapore. Website : www.cafeamazon.sg

PTTOR International Holdings (Singapore), Singapore. Email : interholdco_sg@pttor.com

PTTOR CHINA (Shanghai) Company Limited, Shanghai, the People Republic of China

FST Aviation Services Limited, Hong Kong International Airport Lantau, Hong Kong

Exhibit 2: The 1978 – 2020 Developmental Highlights of PTT & PTTOR

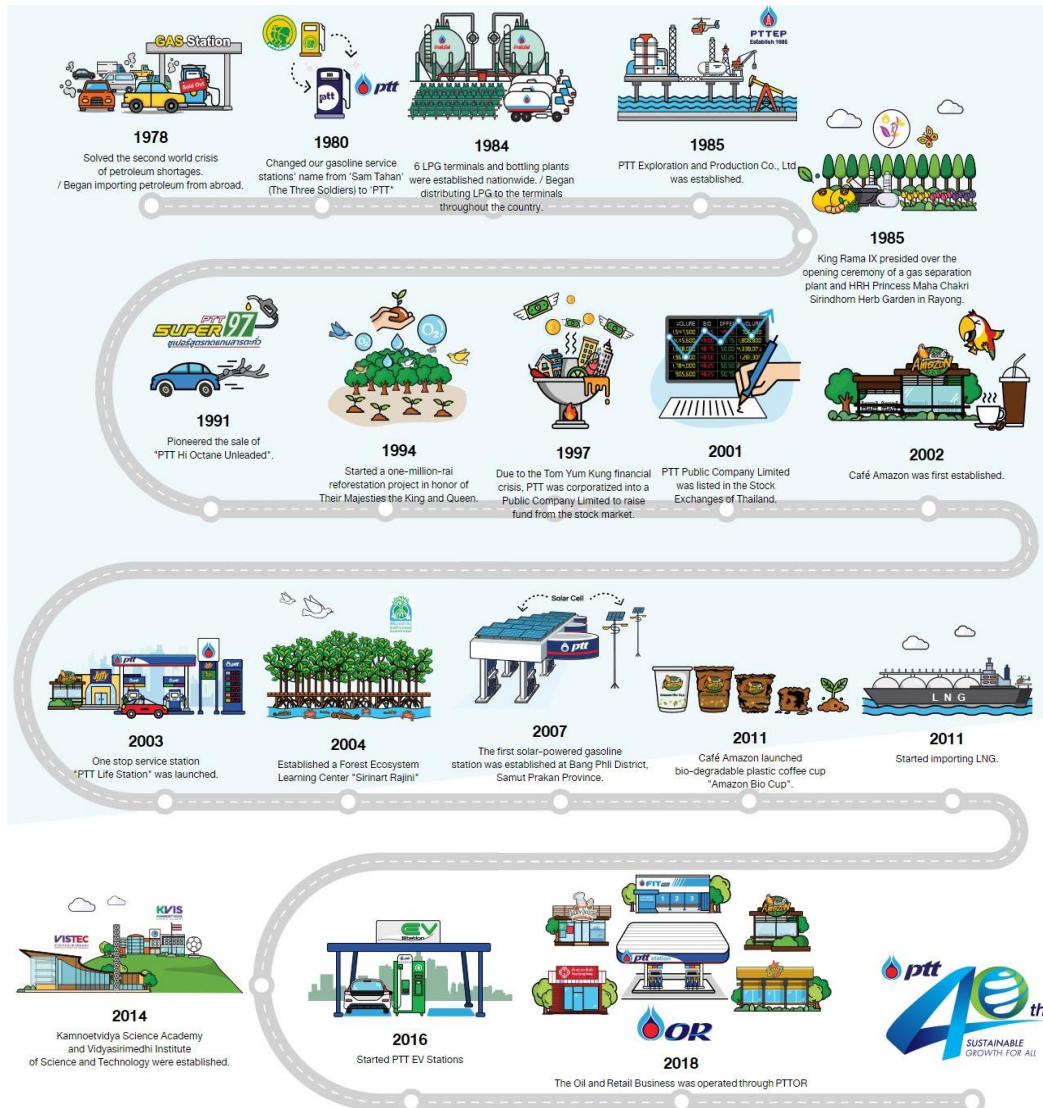


Exhibit 3: Petroleum Terminals and Aviation Fuel Station Map

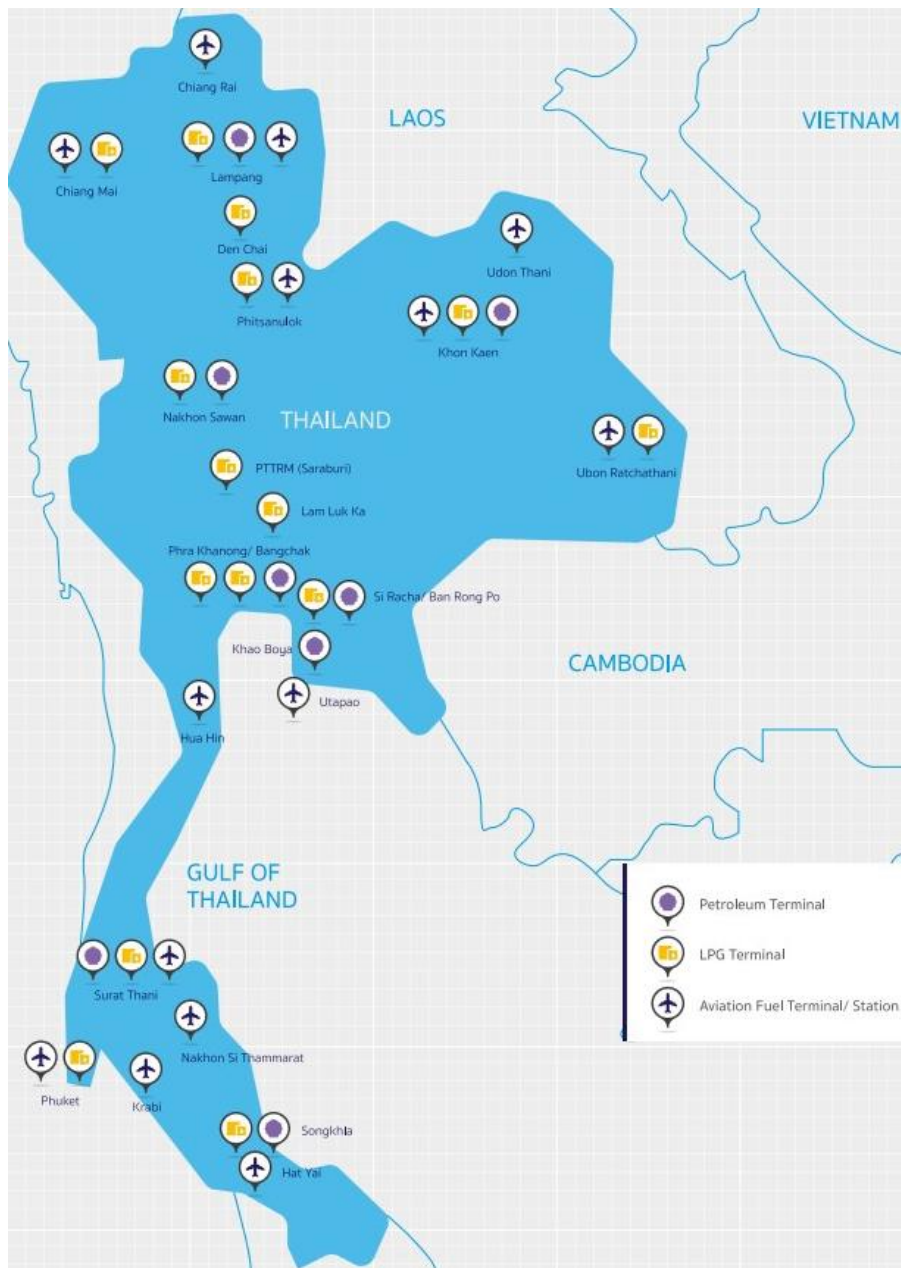


Exhibit 4: PTTOR's Market Share in the year 2019-2020

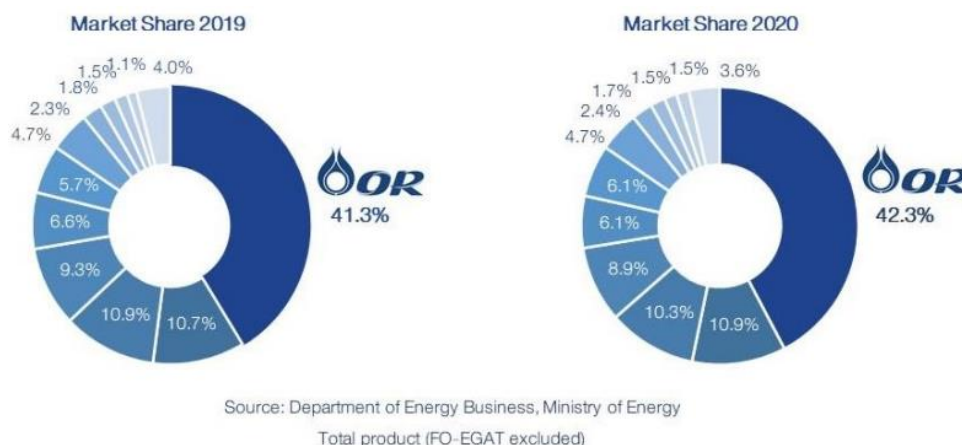


Exhibit 5: PTTOR's Financial Summary during the year 2019-2020

Financial Summary							
2019/2020				3Q20/4Q20			
Revenue	429 Bn	-25.7%	↓ Avg. oil sale prices & volume sold CVS saw a drop in demand ↑ Non Oil outlet expansion	Revenue	109 Bn	+4.4%	↑ Avg. oil sale prices & volume sold F&B outlet expansion ↓ Inter volume sold (The Philippines)
Gross Profit	33.1 Bn	-2.8%	↓ Oil volume sold (JET A1) ↑ Oil margin/liter (0.89 to 0.97) F&B outlet expansion	Gross Profit	9.1 Bn	-8.0%	↓ Oil margin/liter (1.21 to 1.04) ↑ F&B outlet expansion
EBITDA	17.6 Bn	+3.6%	Net OPEX - TFRS #16 leases - Cost savings	EBITDA	5.0 Bn	-11.9%	↓ Gross margin
Net Profit	8.8 Bn	-19.3%	↑ Depreciation & amortization Loss from derivatives	Net Profit	2.9 Bn	-15.3%	↓ EBITDA ↑ Depreciation & amortization

Additional sources: More figures and tables are available from

<https://investor.pttor.com/en/downloads/one-report>,

<https://investor.pttor.com/en/stock-info/historical-price>

<https://or.listedcompany.com/misc/presentation/20210225-or-am-fy2020-02.pdf>,

https://www.pttor.com/en/about/business/business_or/International-Business
International Business (pttor.com),

<https://www.pttplc.com/en/About/About-Ptt/Background.aspx>,

PTT Public Company Limited: Our History (pttplc.com), Hofstede Insights website

(<https://www.hofstede-insights.com/country-comparison/>),

References

- Al Jazeera. (2021, February 3). *Take-off delayed: COVID snuffs out fragile Asia aviation recovery*. Aviation | Al Jazeera. Retrieved October 20, 2022, from <https://www.aljazeera.com/economy/2021/2/3/take-off-delayed-covid-snuffs-out-fragile-asia-aviation-recovery>
- Aumeboonsuke, Vesarach. (2016). *Multinational Finance*. Thailand: SE-ED (SE-EDUCATION) Publication.
- Bloom B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
- Butler, Kirt C. (2016). *Multinational Finance: Evaluating Opportunities, Costs, and Risks of Operations*, (6th ed.). John Wiley & Sons.
- Copeland, Thomas E., Weston, J. Fred, Shastri, Kuldeep (2005). *Financial Theory and Corporate Policy*. Pearson Addison Wesley.
- Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. (2021). Retrieved November 2021, from <https://github.com/CSSEGISandData/COVID-19>.
- Daily Energy Insider. (2021). Retrieved from <https://dailyenergyinsider.com/news/26666-jet-fuel-consumption-sags-for-months-running-amidst-covid-19-impacts/>.
- Encyclopedia of Business in Today's World. (2022, October 8). SAGE Publications Inc. Retrieved December 2021, from <https://us.sagepub.com/en-us/nam/encyclopedia-of-business-in-todays-world/book232589>
- Eiteman, D., Stonehill, A., & Moffett, M. (2018). *Multinational Business Finance* (15th ed.). Pearson.
- Fuel Consumption Dives 12.5% in 2020. (2021, February 3). Retrieved October 20, 2022, from <https://www.bangkokpost.com/business/2061687/fuel-consumption-dives-12-5-in-2020>.
- Fuel retail in the age of new mobility. (2021, April 1). McKinsey & Company. Retrieved October 2021, from <https://www.mckinsey.com/industries/oil-and-gas/our-insights/fuel-retail-in-the-age-of-new-mobility>
- Gössling, S., Humpe, A., Fichert, F., & Creutzig, F. (2021). COVID-19 and pathways to low-carbon air transport until 2050. *Environmental Research Letters*, 16(3), 034063. <https://iopscience.iop.org/article/10.1088/1748-9326/abe90b>
- Hofstede, G., (1980). *Culture's Consequences*. SAGE Publishing.

- Hofstede Insights. (2021, June 21). Country Comparison. Retrieved December 2021, from <https://www.hofstede-insights.com/country-comparison/>
- IATA. Retrieved September 2021, from The International Air Transport Association Web site: <https://www.iata.org/en/iata-repository/publications/economic-reports/thailand-value-of-aviation/>
- IATA. Retrieved September 2021, from The International Air Transport Association Web site: http://www.iata.org/pressroom/facts_figures/Pages/presentations.aspx
- International Monetary Fund (IMF). (2013). *Country Report No. 12/124. June 2012*. Bangkok. *International Market Selection*. (n.d.). Retrieved December 2021, from https://single-market-economy.ec.europa.eu/sectors/tourism/business-portal/internationalisation-tourism-businesses/international-market-selection_en.
- International Market Selection*. (n.d.). Retrieved December 2021, from <https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2020/covid19/en-public-opinion-in-the-time-of-covid19-202104.pdf>
- Kluyver, C. A., & Pearce II, J. A. (2021). *Global Business Strategy* (2nd ed.). Business Expert Press.
- Mathieu, E. (2020, March 5). *Coronavirus (COVID-19) Vaccinations*. Our World in Data. Retrieved November 2021, from <https://ourworldindata.org/covid-vaccinations>
- Office of the National Economic and Social Development Board. "Gross Domestic Product: Q2/2012". Retrieved September 2012, from Office of the National Economic and Social Development Board Web site: http://www.nesdb.go.th/Portals/0/eco_datos/account/qgdp/data2_12/detail_Thai.pdf
- Office of Tourism Development*. Retrieved September 2013, from Office of Tourism Development Web site: <http://tourism.go.th/index.php?mod=WebTourism&file=details&dID=11&cID=336&dcID=1906>
- Oil and Gas in Thailand - Market Summary, Competitive Analysis and Forecast to 2025*. (n.d.). Retrieved October 2021, from <https://www.reportlinker.com/p06103474/Oil-and-Gas-in-Thailand-Market-Summary-Competitive-Analysis-and-Forecast-to.html>
- Onthaworn, P. (2021, September 14). *PTT oil and fuel sales down 10 percent*. Thai Enquirer. Retrieved October 2021, from <https://www.thaienquirer.com/32647/ptt-oil-and-fuel-sales-down-10-per-cent/>
- Phnom Penh Post. *Covid-19 Sinking Thai Aviation Deeper, CAAT Warns*. (n.d.). Retrieved October 2021, from <https://www.phnompenhpost.com/business/covid-19-sinking-thai-aviation-deeper-caat-warns>

- Piyanuch Sathapongpakdee. (2021, March). *Industry Outlook 2021-2023: Air Transport*. In *www.krungsri.com*. Retrieved from https://www.krungsri.com/getmedia/dd677ac6-bc96-45e5-a9e8-3f77219a01ca/O_Air_Transport_210303_EN_EX.pdf.aspx
- Praiwan, Y. (2021, August 4). *Fuel consumption drops by 1.7%*. <https://www.bangkokpost.com>. Retrieved October 2021, from <https://www.bangkokpost.com/business/2159611/fuel-consumption-drops-by-1-7->
- PTT Company, *Business Highlights | PTT Oil and Retail Business (OR)*. (n.d.). Retrieved November 2021, from <https://investor.pttor.com/en/financial-info-and-report/business-highlights>
- PTT Oil and Retail Business Public Company Limited, *Aviation Fuels*. (n.d.). PTT Oil and Retail Business Public Company Limited. <https://www.pttor.com/en/product/commercial/Aviation-Fuel>
- PTT Oil and Retail Business Public Company Limited (PTTOR). (2020). *Annual Report 2020*. Bangkok.
- PTT Oil and Retail Business Public Company Limited (PTTOR). (2019). *Annual Report 2019*. Bangkok.
- PTT Oil and Retail Business Public Company Limited, *Major Shareholders | PTT Oil and Retail Business (OR)*. (n.d.). Retrieved November 2021, from <https://investor.pttor.com/en/shareholder-info/major-shareholders>
- PTT Oil and Retail Business Public Company Limited, *Oil Business*. (n.d.). PTT Oil and Retail Business Public Company Limited. https://www.pttor.com/en/about/business/business_or/Oil-Business
- PTT Oil and Retail Business Public Company Limited, ORZON. (n.d.). PTT Oil and Retail Business Public Company Limited. https://www.pttor.com/en/about/business/business_or/ORZON
- PTT Public Company Limited, Investor Relations Department. (2020). Retrieved September 2021, Investor Update Virtual Conference by Macquarie Securities, from <https://www.pttplc.com/https://www.pttplc.com/uploads/CG/Publication/InvestmentPlan&Outlook2020.pdf>
- Setboonsarng, C. (2021, March 29). Coffee, cookies and electric cars: Thai fuel giant bets billions on gas station of the future. Reuters. Retrieved November 2021, from <https://www.reuters.com/business/energy/coffee-cookies-electric-cars-thai-fuel-giant-bets-billions-gas-station-future-2021-03-29/>

- Staff, R. (2020, May 11). Thailand's PTT books losses and cuts investment amid coronavirus outbreak. U.S. Retrieved November 2021, from <https://www.reuters.com/article/us-ptt-pcl-results/thailands-ptt-books-losses-and-cuts-investment-amid-coronavirus-outbreak-idUSKBN22N1F1>
- State of Thai Aviation Industry 2020. (n.d.). In <https://www.caat.or.th/>. The Civil Aviation Authority of Thailand. Retrieved from <https://www.caat.or.th/wp-content/uploads/2021/05/STATE-OF-THAI-AVIATION-INDUSTRY-2020.pdf>
- Statista. (2022, September 28). Commercial airlines worldwide - fuel consumption 2005-2022. Retrieved October 2021, from <https://www.statista.com/statistics/655057/fuel-consumption-of-airlines-worldwide/>
- Thailand's Largest Energy Company PTT Books Losses and Cuts Investment Amid Coronavirus Outbreak. (2020, May 11). Retrieved October 2021, from <https://energy.economic-times.indiatimes.com/news/oil-and-gas/thailands-largest-energy-company-ptt-books-losses-and-cuts-investment-amid-coronavirus-outbreak/75674753>
- Thailand Oil and Gas Market Size, Overview | 2022 - 27 | Industry Trends. (n.d.). Retrieved October 2021, from <https://www.mordorintelligence.com/industry-reports/thailand-oil-and-gas-market>
- Thailand Oil & Gas Upstream Market | 2022 - 27 | Industry Share, Size, Growth - Mordor Intelligence. (n.d.). Retrieved October 2021, from <https://www.mordorintelligence.com/industry-reports/thailand-oil-and-gas-upstream-market>
- Thailand's PTTOR to Triple Coffee Shops Overseas to 1,000. (2021, October 5). Retrieved October, 2021, from <https://asia.nikkei.com/Business/Food-Beverage/Thailand-s-PTTOR-to-triple-coffee-shops-overseas-to-1-000>.
- The Civil Aviation Authority of Thailand. (n.d.). State of Thai Aviation Industry 2019. In <https://www.caat.or.th/>. Retrieved from <https://www.caat.or.th/wp-content/uploads/2020/06/STATE-OF-THAI-AVIATION-INDUSTRY-2019.pdf>
- TheGlobalEconomy, Portugal economic indicators. (n.d.). TheGlobalEconomy.com.
- TheGlobalEconomy, Slovenia economic indicators. (n.d.). TheGlobalEconomy.com.
- Retrieved January 2022, from <https://www.theglobaleconomy.com/Slovenia/>
- Yin, R. K. (2009). Case Study Research: Design and Methods. SAGE Publications, Inc.