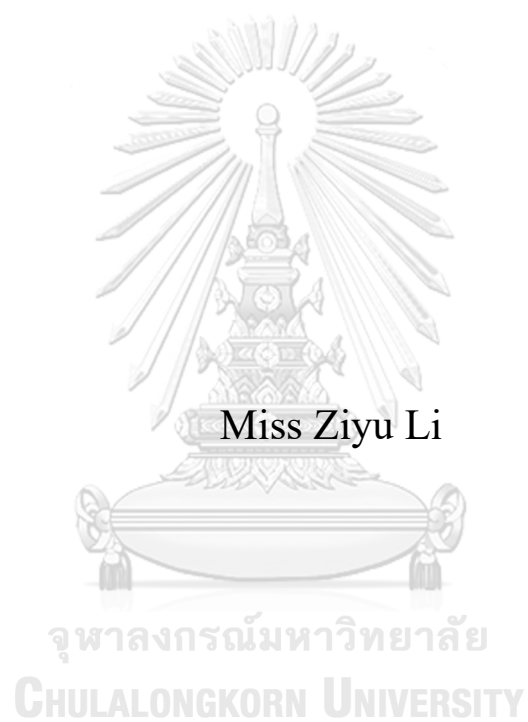


Marketing Analysis of China Eastern under the impact of  
Covid-19

How can CEA remain sustainable in the next decade?



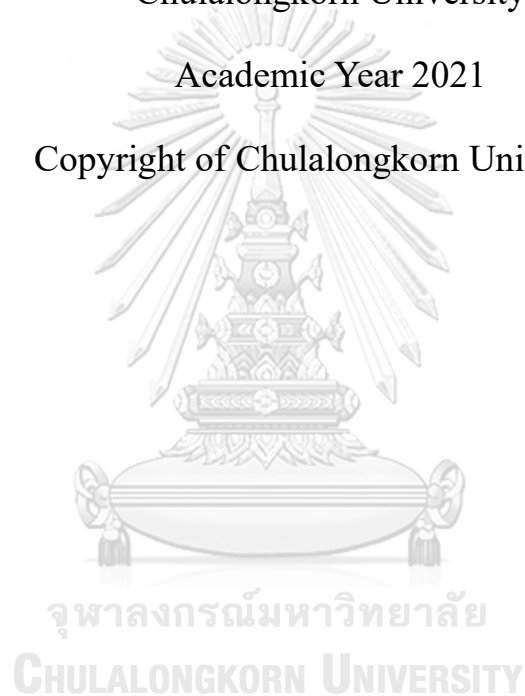
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Requirements  
for the Degree of Master of Arts in Business and Managerial Economics  
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บทวิเคราะห์การตลาดของ China Eastern ภายใต้ผลกระทบของ  
Covid-19 CEA จะยังคงยั่งยืนในทศวรรษหน้าได้อย่างไร?



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จุฬาลงกรณ์มหาวิทยาลัย

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of Covid-19How can CEA remain sustainable in the  
next decade?  
By                                      Miss Ziyu Li  
Field of Study                      Business and Managerial Economics  
Thesis Advisor                      Assistant Professor NIPIT WONGPUNYA, Ph.D.

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Accepted by the FACULTY OF ECONOMICS, Chulalongkorn University in  
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จุฬาลงกรณ์มหาวิทยาลัย  
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จื่อยู หลี : บทวิเคราะห์การตลาดของ China Eastern ภายใต้ผลกระทบของ Covid-19  
CEA จะยังคงยั่งยืนในทศวรรษหน้าได้อย่างไร?. ( Marketing Analysis of China Eastern  
under the impact of Covid-19How can CEA remain sustainable in the next  
decade?) อ.ที่ปรึกษาหลัก : นิพัทธ์ วงศ์ปัญญา

ภาคการท่องเที่ยวและการบินพลเรือนในจีนและทั่วโลกได้รับผลกระทบอย่างรุนแรงจากโควิด-19 ไชน่าอีสเทิร์นแอร์ไลน์ได้รับผลกระทบอย่างรุนแรงจากการระบาด โดยรายรับรวมลดลง 60.95 พันล้านหยวนในปี 2020 ลดลง 52.66% จากปี 2019 บทความนี้จะตรวจสอบ China Eastern ผ่านการวิเคราะห์ PEST แรงกดดันทั้ง 5 ของ Porter และการวิเคราะห์จุดไฟ และให้คำแนะนำเพื่อการพัฒนาอย่างยั่งยืนในทศวรรษหน้าตามผลการวิเคราะห์การตลาด รัฐบาลจีนให้ความสำคัญอย่างยิ่งต่อการฟื้นตัวของอุตสาหกรรมการบินพลเรือนของจีน และได้ออกนโยบายสนับสนุนหลายประการ โอกาสในการเติบโตใหม่อาจเกิดขึ้นเมื่อมีการควบคุมการระบาดใหญ่ทั่วโลกและเศรษฐกิจโลกฟื้นตัว แม้ว่าสภาพแวดล้อมของการแข่งขันที่รุนแรงซึ่ง China Eastern ดำเนินการอยู่นั้นเอื้อต่อการพัฒนาในอนาคต แต่ China Eastern ก็ยังมีความโดดเด่นอีกมาก ไชน่าอีสเทิร์นใช้ความคิดริเริ่มในช่วงการระบาดเพื่อแนะนำผลิตภัณฑ์ส่งเสริมการขาย "Fly At Will" ซึ่งฝ่าฟันสถานการณ์เชิงลบและทำหน้าที่เป็นตัวเลือกที่มีประสิทธิภาพในการลดผลกระทบของการแพร่ระบาด ธุรกิจขนส่งสินค้าทางอากาศได้ดีที่สุดในรายได้ของ China Eastern และบริษัทที่โอกาสในการพัฒนาขนส่งสินค้าทางอากาศ แต่ก็ยังเผชิญกับความท้าทายด้านกำลังการผลิตที่ไม่เพียงพอ นวัตกรรมทางเทคโนโลยี และการอัปเดตทางอุตสาหกรรม ในอีก 10 ปีข้างหน้าของการพัฒนาที่ยั่งยืน China Eastern ควรใช้เทคโนโลยีขั้นสูงอย่างจริงจัง เข้าใจความต้องการของลูกค้า และเปิดตัวผลิตภัณฑ์ที่แตกต่างอย่างต่อเนื่อง ให้ความสนใจกับการพัฒนาธุรกิจขนส่งสินค้าทางอากาศ ค้นหาโอกาสเพื่อยกระดับธุรกิจขนส่งสินค้าทางอากาศ ปรับปรุงความสามารถในการขนส่งสินค้า เพิ่มความสามารถในการแข่งขัน และแปลงร่างเป็นผู้ให้บริการโลจิสติกส์ซัพพลายเชนแบบครบวงจร

จุฬาลงกรณ์มหาวิทยาลัย  
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สาขาวิชา เศรษฐศาสตร์ธุรกิจและการจัดการ ลายมือชื่อนิสิต .....

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ปีการศึกษา 2564 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

## 6484012129 : MAJOR BUSINESS AND MANAGERIAL ECONOMICS

KEYWORD China Eastern, SWOT, Porter's Five Forces, PEST, Air cargo,  
D: Aviation

Ziyu Li : Marketing Analysis of China Eastern under the impact of Covid-19  
How can CEA remain sustainable in the next decade?  
Advisor: Asst. Prof. NIPIT WONGPUNYA, Ph.D.

The tourism and civil aviation sectors in China and throughout the world have been severely impacted by Covid-19. China Eastern Airlines was seriously affected by the outbreak, with total revenue declining by 60.95 billion yuan in 2020, a decrease of 52.66% from 2019. The paper examines China Eastern through pest analysis, Porter's five forces model, and swot analysis, and makes recommendations for its sustainable development in the next decade based on the results of the marketing analysis. The Chinese government attaches great importance to the recovery of China's civil aviation industry and has introduced several supportive policies. New growth opportunities may emerge as the global pandemic is controlled and the world economy recovers. Although the environment of strong competition in which China Eastern operates is favorable for its future development, China Eastern still has a long way to go to stand out. China Eastern took the initiative during the outbreak to introduce the promotional product "Fly At Will," which broke through the negative situation and served as an efficient option to reduce the epidemic's effects. The cargo business has performed well in China Eastern's revenue, and the company has seized the opportunity of air cargo development, but it still faces the challenges of insufficient capacity, technological innovation and industrial upgrading. In the next ten years of sustainable development, China Eastern should vigorously use advanced technology, grasp customer demand, and continue to launch differentiated products; pay attention to the development of the air cargo business, seize opportunities to enhance air cargo business, improve cargo capacity, enhance competitiveness, and transform into a comprehensive supply chain logistics service provider.

Field of	Business and Managerial	Student's
Study:	Economics	Signature .....
Academic	2021	Advisor's
Year:		Signature .....

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## Abstract

The tourism and civil aviation sectors in China and throughout the world have been severely impacted by Covid-19. China Eastern Airlines was seriously affected by the outbreak, with total revenue declining by 60.95 billion yuan in 2020, a decrease of 52.66% from 2019. The paper examines China Eastern through pest analysis, Porter's five forces model, and swot analysis, and makes recommendations for its sustainable development in the next decade based on the results of the marketing analysis. The Chinese government attaches great importance to the recovery of China's civil aviation industry and has introduced several supportive policies. New growth opportunities may emerge as the global pandemic is controlled and the world economy recovers. Although the environment of strong competition in which China Eastern operates is favorable for its future development, China Eastern still has a long way to go to stand out. China Eastern took the initiative during the outbreak to introduce the promotional product "Fly At Will," which broke through the negative situation and served as an efficient option to reduce the epidemic's effects. The cargo business has performed well in China Eastern's revenue, and the company has seized the opportunity of air cargo development, but it still faces the challenges of insufficient capacity, technological innovation and industrial upgrading. In the next ten years of sustainable development, China Eastern should vigorously use advanced technology, grasp customer demand, and continue to launch differentiated products; pay attention to the development of the air cargo business, seize opportunities to enhance air cargo business, improve cargo capacity, enhance competitiveness, and transform into a comprehensive supply chain logistics service provider.

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## 1. Introduction

### 1.1 Background

The novel coronavirus (Covid-19) emerged in January 2020 and immediately spread over the world. The worldwide economy is under greater downward pressure because of the Covid-19 epidemic, and the global aviation sector is facing major issues. The introduction of travel restrictions by many governments has significantly reduced the demand and willingness of passengers to travel and as a result, airlines have significantly reduced their capacity, and some are facing operational difficulties. WTTC (2021) reported that in 2020, the Global Travel Industry saw a US\$4.5 trillion decrease in GDP and losses of 62 million jobs throughout the world. According to the IATA (2021), airline employment fell by about one million jobs in 2020 compared to 2019, with net losses anticipated at over \$1 billion.

No matter how quickly airlines and the travel industry cut costs, it will be difficult to escape the difficulties caused by the pandemic crisis, which has arguably damaged the tourism and airline industries extremely badly. Global civil aviation demand recovers in 2021, but the continued evolution of the outbreak and travel restrictions imposed by countries in response to the Delta and Omicron mutant strains have an impact on the steady recovery of passenger demand. Overall traffic, measured in RPKs, increased by 115.9% in February 2022 compared to February 2021. It was an increase over January 2022, when it increased by 83.1 % over January 2021. However, traffic was down 45.5 % compared to February 2019 (IATA,2022).

According to IATA, global air passenger demand (in RPK terms) declined by 58.4% and 65.9% in 2021 and 2020, respectively, compared to 2019 before the outbreak, with the decline moderating; seat capacity recovered to 67.2% in 2021, up 4.4 percentage points from 2020, but still down 15.4 percentage points compared to 2019. This represents a 4.4 % improvement over 2020 but is still 15.4 percentage points lower than in 2019. There are still many parts of

the world where international travel has not yet returned to normal levels. On the cargo side, while the decline in passenger capacity during the outbreak has affected the size of passenger cabin capacity, demand for epidemic prevention supplies and materials is high, with global air cargo demand increasing by 18.7% in 2021 compared to 2020 and 6.9% compared to 2019, the year before the outbreak.

### **1.2 China's civil aviation industry under the impact of the epidemic**

In the face of the serious and complicated circumstances of localized clustering and multi-point spread of covid-19 within China and the expansion outside of China, the civil aviation industry in China has strictly implemented the preventive and control measures of "external prevention of importation, internal prevention of rebound and prevention of people together"; airlines have made efforts to activate the aviation market by launching customized, distinctive, and targeted air transport offerings. In 2021, China's civil aviation industry achieved a total transport turnover of 85.7 billion ton-kilometers, 440 million passengers, and 7.32 million tons of cargo and mail, an increase of 7.3%, 5.5%, and 8.2% compared to 2020, and a recovery of 66.3%, 66.8%, and 97.2% respectively in 2019. The industry has demonstrated strong resilience in the face of adversity (Xinhua News Agency, 2022).

The Covid-19 is still evolving and reappearing, and its influence on China's air transport industry is more profound and long-lasting than predicted. According to the "Research Report on the Operating Conditions of Profitable Civil Aviation Enterprises in 2021" released by the General Department of CAAC, China's civil aviation industry suffered an annual loss of RMB 84.3 billion in 2021. Despite the general intensification of business difficulties for civil aviation companies, 30 airports, and five airlines, in addition to the three major airline protection companies, still made profits and even achieved counter-trend growth (2022).

### **1.3 Main objective**

This paper analyses the macro-environment in which China Eastern Airlines operates and

the competitive situation within the industry, as well as the strengths and weaknesses of China Eastern Airlines, and the opportunities and challenges it faces. It discusses the current status of development of the significant promotional passenger products and cargo services operated by China Eastern in response to the impact of the epidemic and makes recommendations for the sustainability of China Eastern's airline operations and management in the post-epidemic era in light of the current state of epidemic prevention and control, for the reference of other airlines in the aviation industry.

## **2. Methodology and Data Gathering Process**

### **2.1 Methodology**

This paper uses China Eastern Airlines as a case study. Firstly, this paper analyses the environment of China Eastern including the current situation of the international civil aviation industry and China's civil aviation industry, an overview of China Eastern and its operations in the past three years under the impact of the epidemic, an analysis of the company's external macro business environment and an analysis of the industry's competitive environment and the current situation of China Eastern in the industry competition. The company's external macro business environment is analyzed through the PEST method, which includes four aspects: political, economic, social, and technological. The competitive environment of the industry is analyzed through Porter's Five Forces Model, which compares the operational and financial indicators of competitors in the same industry. This paper uses SWOT analysis to analyze the strengths and weaknesses of China Eastern as well as the opportunities and threats it faces. The paper also analyses China Eastern's significant product in the passenger sector and its development in the cargo sector and makes recommendations for China Eastern to adapt to the development of China's unique aviation market and achieve sustainable growth.

#### **2.1.1 PEST analysis**

The environmental analysis is achieved through the PEST method, which includes four

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aspects: political, economic, social, and technological, and examines the external macro business environment of the company based on the analysis of the current situation in China. In this study, the political factors include the political system, policies, and government attitudes; the key strategic elements of the economic factors are: GDP, disposable income level of residents, fixed asset investment, etc.; the social factors mainly analyze people's willingness to travel and changes in consumption habits brought about by the epidemic; the creation and development patterns of new technologies, new procedures, and new materials relevant to business market, as well as the Application backdrop, are among the technological aspects.

#### 2.1.2 Porter's Five Forces Model

The development of a company is influenced by five forces: the threat of potential entrants, the competitive ability to exist, rivals, the replacement ability of alternatives, consumer bargaining power, and supplier bargaining power. These five forces combine to influence the overall competitiveness of an enterprise and the decision of its competitive strategy. Based on the market characteristics of the air transport industry, this paper employs Porter's Five Forces model to assess the competition environment of the business wherein China Eastern operates during its development. The combined forces of the five forces determine the competitive intensity of the civil aviation industry.

#### 2.1.3 SWOT Analysis

This paper uses SWOT analysis to analyze the current situation of China Eastern in the increasingly competitive aviation market and to analyze its strengths and weaknesses, along with the possibilities and challenges it faces. A SWOT analysis can help a corporation clarify the company should concentrate its resources and efforts on its best attributes and most promising prospects.

This paper analyses the case of China Eastern Airlines in the third year of the ongoing

impact of the pandemic, both to see if the strategies mentioned in other papers are applicable and to give further recommendations based on the previously mentioned strategies that are more in line with the trends.

## **2.2 Data**

The marketing analysis in this individual study is based on secondary data gathered from a variety of reputable and open sources, including formal company websites and financial statements, the Civil Aviation Administration of China (CAAC), the National Bureau of Statistics of China, and the International Air Transport Association.

## **3. Company**

### **3.1 Overview**

China Eastern Airlines Corporation Limited was established under Chinese law on 14 April 1995 and is known in the industry as China Eastern Airlines. China Eastern Airlines Corporation Limited (hereafter referred to as China Eastern) is one of the primary subsidiaries of China Eastern Airlines Group Limited, which is one of China's three major state-owned airlines and is headquartered in Shanghai (the other two are Air China and China Southern Airlines). In 1997, the firm was listed on the stock exchanges of New York, Hong Kong, and Shanghai, making it the first airline in China to do so. The primary business of the corporation is the operation of domestic and permitted global and regional air passenger, freight, mail, and baggage delivery businesses and related services. On 12 July 2009, China Eastern merged with Shanghai Airlines in a 1:1.3 share swap, leaving the three most important gateways in the domestic aviation market dominated by China Eastern, Air China, and China Southern Airlines, setting up a three-legged structure in China's aviation industry. China Eastern had a modern fleet of 758 passenger aircraft (including 6 commercial jets) by the end of 2021, with a mean lifespan of 7.7 years for its main aircraft, making it the world's youngest fleet and the most technically advanced aircraft. Eastern Miles frequent flyer members enjoy the benefits of membership in 19 airlines and access to more than 790 airport lounges worldwide



(CEA,2022).

### 3.2 Operational data for China Eastern affected by Covid-19

In FY2020, passenger revenue decreased by 55.46% compared to FY2019, of which domestic passenger revenue increased from 65.94% to 82.03%. In FY2020, Air China's cargo and mail revenue increased by RMB1,069 million, 27.94%, compared to FY2019, as the company carried out unconventional passenger flights to transport epidemic protection materials.

Local carriers reallocated resources to the home market in FY2021, owing to the impact of covid-19 and cross-border travel limitations, and competition on domestic routes has intensified. The company concentrated on home route expansion, opening, and expanding the number of new domestic routes. In comparison to the previous year, passenger revenue in 2021 increased by 10.13%. In terms of cargo and mail revenue, the Company achieved cargo revenue of RMB8,309 million in FY2021, an increase of 69.74 % year over year and accounting for 12.88 % of the Company's air transportation revenue. The cargo and mail tonnage turnover were 3,393.40 million ton-kilometers, up 54.24 percent from the previous year. China Eastern's passenger revenue and cargo revenue for 2019-2021 are set out in the table below (100 million yuan).

	FY2019	FY2020	FY2021	2021Year-on-year
Passenger Revenue	1,102.91	491.27	541.05	10.13%
Mainland China	727.22	402.99	506.11	25.59%
International	338.83	84.23	31.98	-62.03%
Hong Kong, Macau, and Taiwan	36.86	4.05	2.96	-26.91%
Cargo and mail Revenue	38.26	48.95	83.09	69.74%

Table 1 China Eastern's passenger revenue and cargo revenue for 2019-2021

Source: FY2019, FY2020 and FY2021 Annual report of China Eastern

#### 4. Literature Review

Covid-19 has brought an unprecedented impact to the global air transportation industry (Miani et al., 2021), with reduced population mobility, continued decline in orders, flight stoppages, route reductions, and company layoffs, making the air transportation industry development situation particularly severe. Previous studies have shown that in response to the impact of flight restrictions and reduced demand brought about by Covid-19, airlines have mainly adopted strategies to enhance industry cooperation, improve regional airline networks, and save costs to protect cash flow. Shabani, Golrizgashti, and Seyedaliakbar (2016) point out that building partnerships with competitors is one of the effective solutions to improve the performance of the aviation industry. Airlines from different countries should strengthen their ties and cooperation, reduce technical and service barriers, cooperate and avoid conflicts and unnecessary troubles in the industry, and work together to overcome this crisis (Chen,2020). The improvement of the branch network played an important role in the response to the impact of the epidemic. Huaxia Airlines announced its financial report for the first quarter of 2020, showing that the flight volume has recovered to over 95% in May. Analysis of the financial report shows that the root cause of China Airlines' bottoming out is that the company has initially established a more comprehensive regional airline network and a unique business model in the past. The epidemic has fully demonstrated the unique economic and social value that can be brought by the vigorous development of China's regional airline network. In the post-epidemic era, more consideration should be given to the value of the regional airline network. By expanding the regional airline network, it can effectively extend and complement the trunk airline hubs, gain stable passenger sources, and increase the radiating influence of trunk airports, and regional airlines also have advantages that trunk airline networks cannot match (Liu, 2020). Apart from that, the airlines reconsidered the markets they serve, aircraft inventory management, and maintenance aspects of their business in response to the forced groundings during the outbreak. Based on these reconsiderations, several airlines decided to adopt a cost-saving strategy by retiring older aircraft earlier or keeping fewer aircraft types

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for commitments. Da Silveira Pereira & de Mello (2021) compares data from the first quarter of 2020 with the first quarter of 2019 for the three major Brazilian airlines, using the MCDEA model for analysis to assess the operational efficiency of Brazilian airlines during the Covid-19 outbreak. The assessment reveals the age of the aircraft and the configuration of the network reorganization of the different companies, which is reflected in the differences in efficiency during the outbreak. Because of the long-term impact of Covid-19, enterprises with a better aircraft type portfolio performed better in terms of efficiency. Airlines and aircraft leasing companies have adjusted their aircraft introduction plans, reduced capital expenditures, and continued to strengthen risk management and cash flow management. The main manufacturers shut down production and adjusted their production capacity to cope with the sharp contraction of demand while giving customers more choices to maintain the original orders; suppliers also took the same measures, shutting down production while looking for alternative demand and shifting their business focus; airlines adjusted the size of their fleets and switched from passenger to cargo to ease economic pressure and protect cash flow (Liu, Qin, & Qian, 2020).

However, much less information is available on the impact of advancing air cargo operations, which did not receive enough attention compared to easing economic pressures and enhancing industry cooperation but performed very well during the outbreak. The global spread of Coronavirus and the massive capacity cuts by global airlines have had a huge impact on the global industry chain and supply chain, highlighting the shortcomings of China's international air cargo capacity. Shi and Zhou (2020) summarize the impact of the epidemic on the global industry chain and supply chain and the new requirements of the epidemic on the air cargo service chain. The shortcomings of China's international air cargo capacity are analyzed to be mainly the low percentage of cargo and mail traffic on international routes, the development of all-cargo aircraft only at the primary stage, the lack of airports with cargo functions, the lack of a complete international cargo route network, and the low level of Informatization in all links of the air cargo service chain. Therefore, it is

suggested to create an institutional environment suitable for the development of air cargo enterprises, actively introduce supply chain management, improve the system of hub airports with cargo function, pay attention to the introduction of all-cargo aircraft, and the development of intercontinental routes, and strengthen the integrated application of information technology to improve China's international air cargo capacity. In addition to the aggressive recovery measures taken by airlines, the governments are implementing proactive fiscal policies, promoting revenue reduction, increasing infrastructure investment, implementing policies to promote air transport development, and airlines are offering special flights to deliver epidemic prevention materials in response to the epidemic (Chen,2020). The government gave various guarantees and subsidies to overcome the difficulties together to avoid more links in the industry chain is drawn to a halt. The industry landscape will deepen further as the epidemic leads to the consolidation of main manufacturers and suppliers. At a macro level, the country must consider and implement appropriate steps to enhance the aviation manufacturing industry's gathering and integrate the global supply chain (Liu, Qin, & Qian, 2020).

This paper argues that cost saving, optimizing aircraft type mix and fleet size can reduce the economic burden to a certain extent, but the airline still needs a solid strategy in the face of adversity, not just defending but not offending, and China Eastern needs to adjust its marketing strategy and find a breakthrough that can sustain its growth in the medium to long term. The purpose of this study is twofold. The first is to conduct a marketing analysis of its business situation by applying the model; the second is to make recommendations on China Eastern's airline operations in the post-epidemic era based on the current development of its cargo business and the basis of its marketing strategy.

## 5. PEST analysis

### 5.1 Political environment

As one of the industries most directly affected by the epidemic, the civil aviation industry has been affected to a far greater depth and continuity than expected and is facing many difficulties in its operation and development. The Chinese government has provided new supporting policies to ensure the stable development of civil aviation. The CAAC issued the "Notice of the CAAC on the Support Policies for the Active Response to the Covid-19" in March 2020 to assist the struggling service industry, including the civil aviation industry, tide over the difficult times and resume development. In April 2020, the CAAC issued the Circular on the Establishment of Green Channels for the Approval of International Air Cargo during the Epidemic Prevention and Control Period to facilitate the smooth and efficient approval of international cargo flight plans. In May 2020, China's Ministry of Finance issued the Circular on Financial Support Policies for Civil Aviation Transport Enterprises to Stabilize and Enhance International Cargo Capacity during the Epidemic Prevention and Control Period, which provides financial support for projects to retrofit cargo in the passenger cabin of aircraft and for international cargo flights that do not carry passengers.

The National Development and Reform Commission, the Ministry of Transport, the Civil Aviation Administration, and 14 other departments issued the "Several Policies on Promoting the Recovery and Development of Difficult Industries in the Service Sector" in February 2022, with the approval of China's State Council, in which five targeted policies were tailored for the civil aviation industry. The policy focuses on the problems faced by civil aviation due to the epidemic, such as increased liquidity risk, pressure on expenditure for epidemic prevention and control, serious decline in economic efficiency, and shortage of funds for infrastructure construction, and guides enterprises to enhance their self-development capability while improving their economic efficiency.

The Civil Aviation Administration of China, the National Development and Reform

Commission and the Ministry of Transport(2022) jointly released the "14th Five-Year Plan for Civil Aviation Development", a comprehensive analysis of historical growth, industry resources, and demand forecasts, taking into account the specificity of the development stages during the 14th Five-Year Plan period, the plan divides civil aviation into two development phases: the 2-year recovery period and the 3-year growth period. "The plan divides the 14th Five-Year Plan into two development phases: a two-year recovery period and a three-year growth period and differentiates the focus of the development objectives to improve the guidance and precision of the plan. In terms of the air transport network, the plan mentions the construction of a comprehensive domestic air transport network, international air transport corridors, and three major systems of air hub functions, focusing on the implementation of "stem and branch access, full network connection", basic air services, "air silk road", enhancing international air cargo capacity, and the strengthening of international aviation hubs. It is expected that by 2025, the number of civil transport airports will reach more than 270, with 17 million guaranteed flight movements, 175-billion-ton kilometers of total transport turnover, 930 million passengers, and 9.5 million tons of cargo and mail transport.

## **5.2 Economic environment**

From 2017-to 2019, China's economy continued to grow, but at a slower rate year on year. The sudden outbreak of the Coronavirus epidemic hit the country's economy hard in 2020, but as the domestic epidemic was gradually brought under control, the economy began to recover gradually, and the disposable income of the population resumed growth after a brief decline.

### **5.2.1 GDP growth**

According to the National Bureau of Statistics of China (2022), China's gross domestic product (GDP) increased by 6%, 2.3 percent, and 8.1 percent a year out of 2019 to 2021, reaching RMB 98.6 trillion, RMB 101.5 trillion, and RMB 114.3 trillion, respectively. With 2020's growth rate falling dramatically by 3.7 percentage points from 2019, it will be the

lowest since the global financial crisis in 2008. Since 2020, economic activity has been hit hard by the sudden outbreak of COVID-19, which has restricted production, distribution, and consumption. 2021, China's gross domestic product (GDP) was RMB 114.3 trillion, an increase of 8.10% at constant prices compared to the same period of the previous year, benefiting from the effective control of the domestic epidemic and a stronger economic recovery in the second and third quarters of the country, which played an important role in the overall economic recovery in 2021. The data for 2017-2021 is shown in figure 1 and figure 2 below.

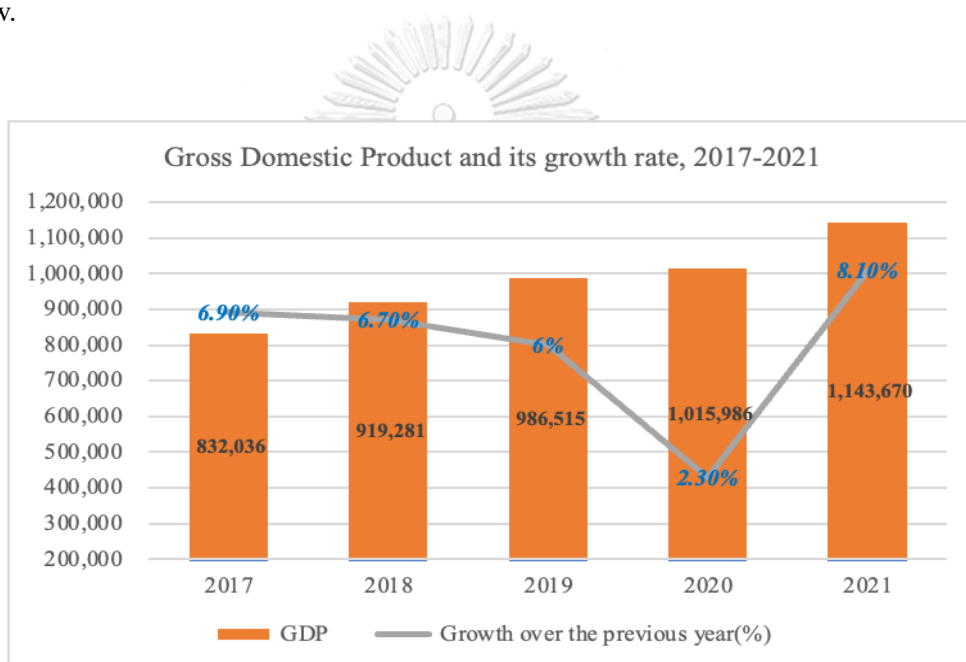


Figure 1 2017-2021 annual GDP and its growth rate (100 million Yuan)

Source: National Bureau of Statistics of China in 2022.

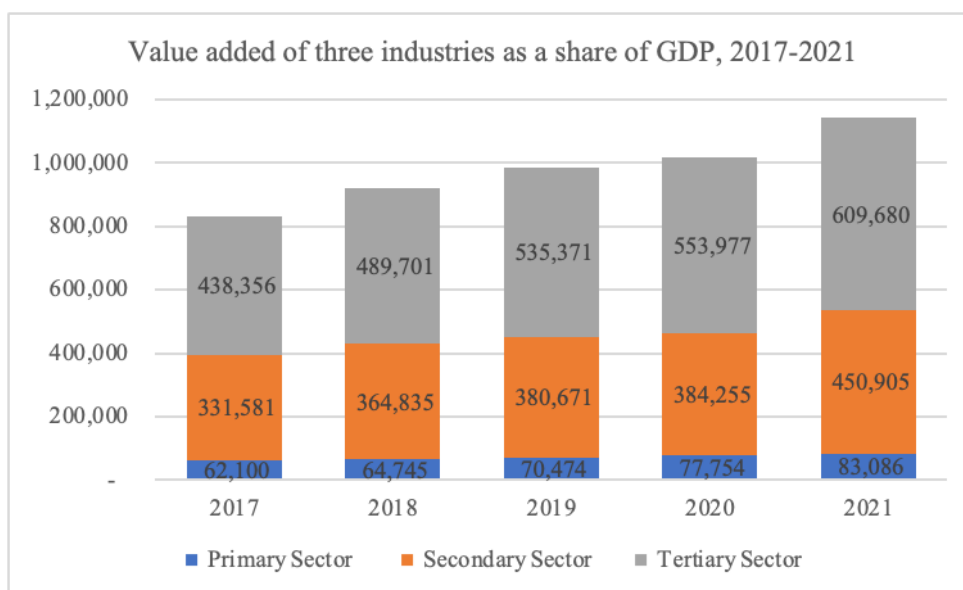


Figure 2 2017-2021 Value added of three industries as a share of GDP (100 million Yuan)

Source: National Bureau of Statistics of China in 2022.

### 5.2.2 Disposable income per capita

Based on the National Bureau of Statistics of China (2022), national per capita disposable income in 2021 was 35,128 yuan, up 9.1% nominally compared with the year before, 8.1% in the real net of price elements; and 14.3% compared with 2019 (all below are year-on-year growth rates if not otherwise stated), up 6.9% on average over two years, and 5.1% in real terms net of price elements. 2021 National Per capita consumption expenditure of RMB 24,100, a nominal growth of 13.6% over the year before, and 12.6% in real terms, net of price elements; and 11.8% from the year 2019, a two-year average growth of 5.7%, and a two-year average growth of 4.0% in real terms, net of price elements. Compared with 2019, the two-year average growth rates of the eight major categories of national per capita consumer spending were: food, tobacco, and alcohol increased by 8.6%, clothing by 3.0%, housing by 5.6%, household goods and services by 5.4%, transportation and communications by 5.0%, education, culture and entertainment by 1.7%, healthcare by 5.4% and other goods and services spending by 4.2%.



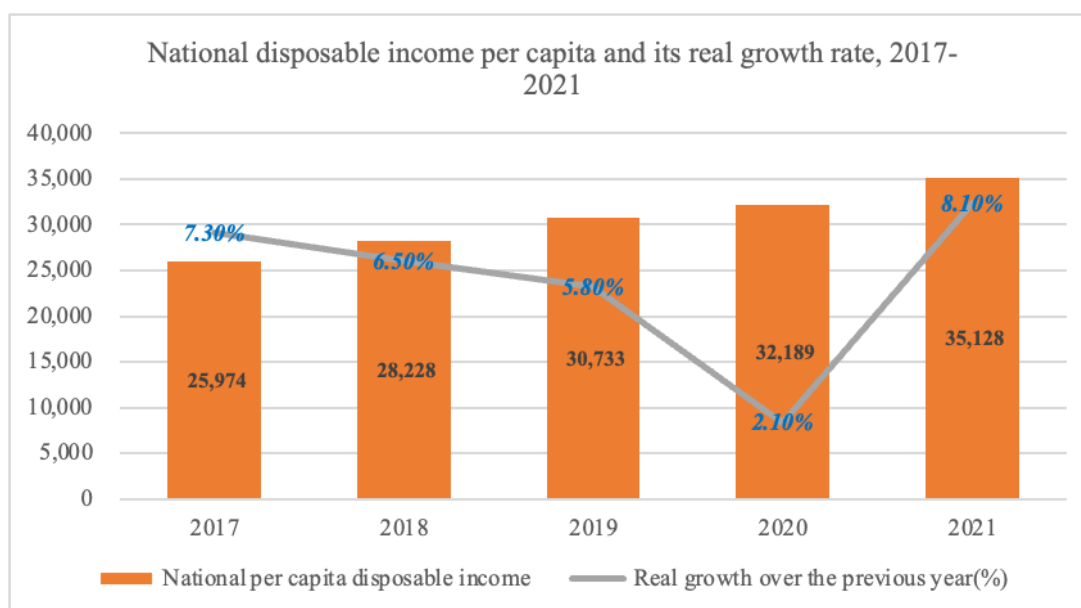


Figure 3 National disposable income per capita and its real growth rate, 2017-2021(Yuan)

Source: Statistical Bulletin on National Economic and Social Development of the People's Republic of China 2021

**National per capita consumption expenditure and its composition in 2021**

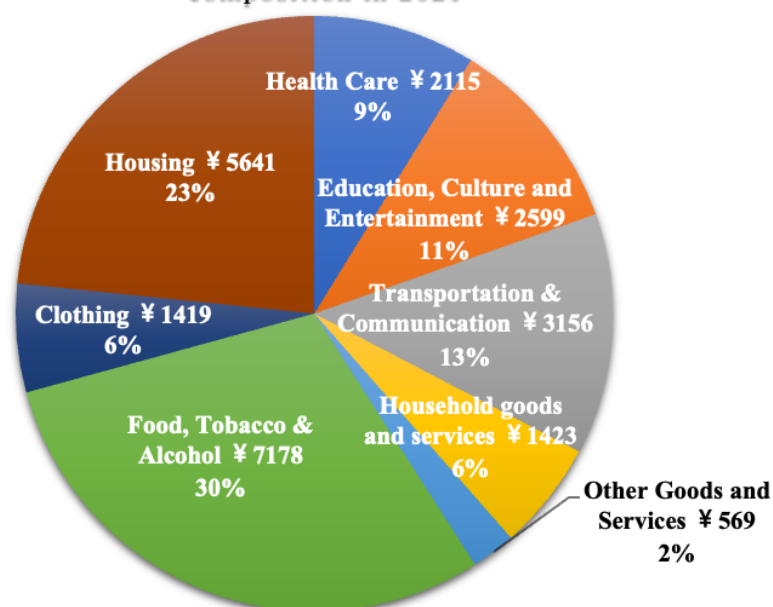


Figure 4 National per capita consumption expenditure and its composition in 2021

Source: Statistical Bulletin on National Economic and Social Development of the People's Republic of China 2021

### 5.2.3 National fixed-asset investment

According to the National Bureau of Statistics of the people's Republic of China and the Civil Aviation Administration of China. From 2019 to 2021, the national investment in fixed assets (excluding farmers) amounted to RMB 55.15 trillion, RMB 51.89 trillion, and RMB 54.45 trillion, representing year-on-year growth of 5.4%, 2.9%, and 4.9% respectively. During the same period, the total investment in civil aviation fixed assets amounted to RMB181.99 billion, RMB162.76 billion, and RMB188.04 billion, of which RMB96.94 billion, RMB108.14 billion, and RMB122.25 billion were invested in civil aviation capital construction and technical renovation respectively, representing the year increase of 3.5%, 11.6%, and 6.4% respectively, and 6, 8 and 7 new civil transport airports were added respectively (2020,2021,2022). The total scale of investment in civil aviation fixed assets has declined significantly since 2019, while the scale of investment in civil aviation capital construction has maintained an upward trend. The number of civil airports licensed nationwide has continued to rise, leading to a steady increase in civil aviation capital investment.

## 5.3 Social Environment

### 5.3.1 Low willingness to travel

According to data from the May 2022 Traveler Travel Intentions Index (TWI) Analysis Report, released by CAPSE, an independent third-party measurement agency, based on the collection of 9,147 valid samples: "Overall, traveler travel intentions were not strong in May; in terms of business travel intentions, they are still declining overall, with international travel affected by the international epidemic willingness to travel remained low."(CAPSE, 2022).

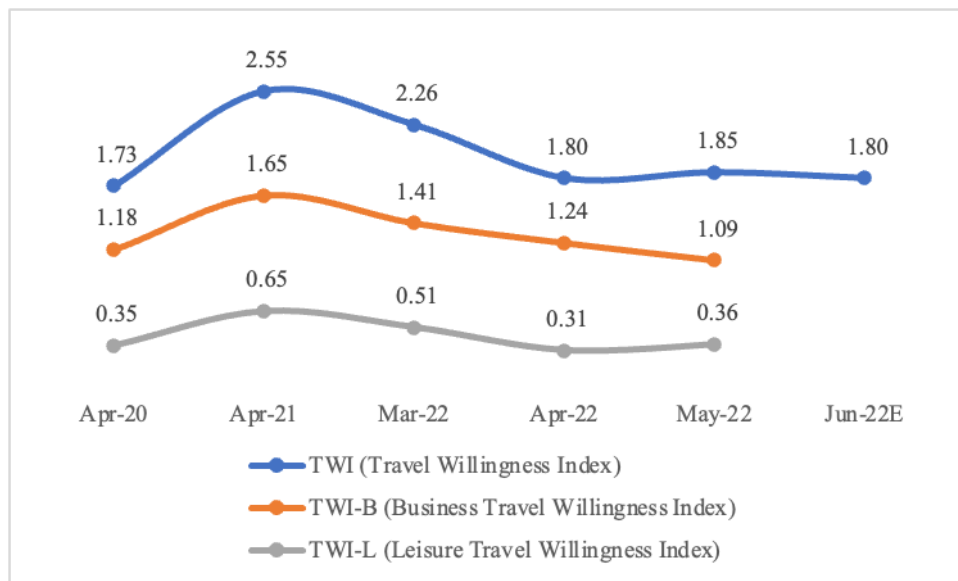


Figure 5 Trends in TWI

Source: CAPSE Traveler Travel Intention Index (TWI) Analysis Report

As CAPSE (2022) reported, based on 13,396 valid samples collected, the impact of epidemic-related prevention policies was the main reason why travelers did not travel and did not plan to travel in April, by investigating the reasons why travelers did not travel in March and did not plan to travel in April. Fear of contracting the virus or becoming a close contact was one of the main reasons for not traveling due to the seriousness of the current local epidemic situation. With less than 30% of travelers having no travel plans, the demand for travel remains strong, but the impact of the epidemic and epidemic prevention policies continues to depress the travel demand. The future demand for travel post-pandemic is accompanied by great instability, not only in the airline industry (Santos, Oliveira & Aldrighi, 2021; Gallego and Font, 2021), but also in other modes of transport (Thombre & Agarwal, 2021).

### 5.3.2 The epidemic boosts the online economy and air cargo

While the outbreak of Covid-19 had a dramatic effect on the real economy in China, but the resulting Internet-based economy has offset the bad effects, with e-commerce taking on an increasingly critical position in boosting consumer consumption and contributing to

upgrading the overall quality of the economy. Data released by China's National Bureau of Statistics showed that national online retail sales in the first three quarters of 2020 amounted to RMB 8,006.5 billion, up 9.7% year-on-year, a growth rate 2.4 percentage points faster than in the first half of the year. Among them, online physical goods retail sales were RMB 6,647.7 billion, up 15.3%, accounting for 24.3% of overall consumption goods retail sales. E-commerce in China showed a trend of rapid development. According to EY's Future Consumer Index 2022 report, the epidemic is accelerating online interactions and home consumption. Consumers are willing to spend more time in the online space and expect seamless integration of online and offline experiences. Of the five emerging consumer groups identified in the report, 39% of 'experience-first' consumers are choosing to shop online instead of physically.

The rapid expansion of online consumption is driving growth in the size of the consumer market and bringing opportunities to the intermediate express industry. According to the International Air Transport Association (IATA), global air cargo demand will grow by 6.9% in 2021 compared to 2019, and the industry's revenue will reach a record US\$175 billion in 2022(2021). In China's government work report, Premier Li Keqiang pointed out the need to support e-commerce and express delivery into rural areas and expand rural consumption. Multiple measures should be taken to expand consumption and adapt to the diversified needs of the masses. Enhance China's international freight capacity and accelerate the development of new business models such as cross-border e-commerce.

#### **5.4 Technology environment**

The CAAC is actively pursuing industry-wide technical improvements. Led by demand, it is strengthening basic research on airworthiness verification methods for unmanned aircraft, electric propulsion systems, hydrogen fuel cells, 3D printing, and new composite materials. Rational planning of scientific research projects and construction of conditions, and support for the industrial sector in the construction of national certification laboratories and test flight

bases in the field of independent airworthiness certification. Continuously promote the airworthiness certification of CR929, C919, MA700, Yangtze River-1000A engines, straight 15 helicopters, and other products. Accelerate the airworthiness certification of domestically produced aviation components, advanced communication, navigation equipment, etc., and support their industrial application. Accelerate the improvement of the airworthiness management model for UAS based on operational risks. Enhance the independent capability of aviation oil and aviation certification technology and promote the domestic application of aviation oil and aviation products.

"Made in China 2025" puts forward a "three-step" strategy for the construction of a strong manufacturing country in China, promoting intelligent upgrading instead of mere automation, promoting information upgrading, through the application of sensing, machine vision, and other systems, the formation of big data collection, reaction and prediction of the future. Through the application of sensing, machine vision, and other systems, the company will be able to collect, react to and predict the future of big data, and form an effective closed loop in product development and manufacturing, product design and manufacturing, and product quality and management systems.

## 5.5 Summary

As previously stated, the Chinese government places a high value on the growth of China's civil aviation industry. With the global epidemic under control and the global economy improving, new routes may be laid out one after another in the future, and China's civil aviation industry could see new growth chances.

## 6. Porter's Five Forces model \_ Industry environment

Based on the market characteristics of the Air Transport industry, this paper uses the Porter's Five Forces model to assess the competitive landscape faced by China Eastern during

its development. The combined force of the five forces determines the intensity of competition in the civil aviation industry. The following is an analysis of the impact of each of the five competitive forces on the actual situation of China Eastern.

### 6.1 Threats from existing competitors in the industry

By the end of 2020, China had 64 transport airlines, divided into 49 state-owned holding firms and 15 privately held companies. There are 11 all-cargo carriers, 9 Sino-foreign joint ventures, and 8 publicly listed firms among the total number of airlines. The share of transport turnover of each airline in 2020 is shown in Figure 6.

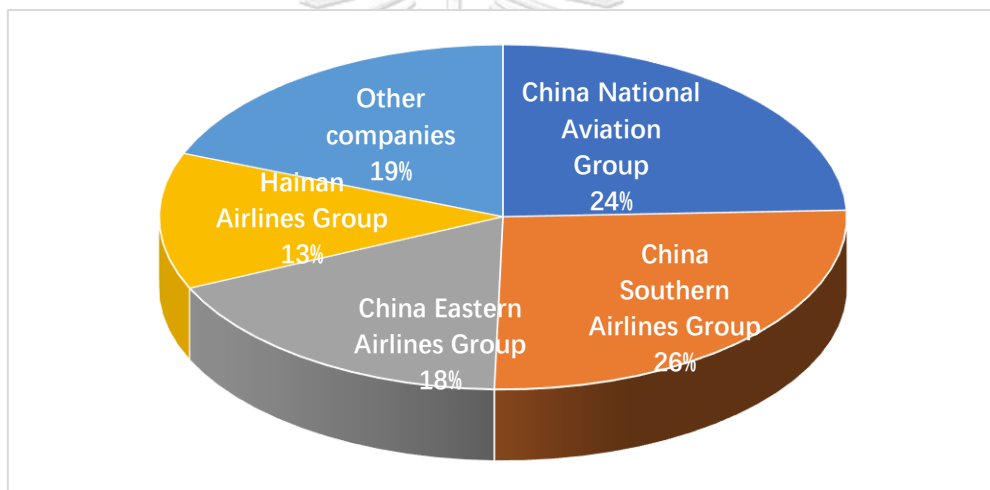


Figure 6 Share of total transport turnover by airline (group) companies in 2020  
Source: Statistical bulletin on the development of China's civil aviation industry in 2020

China Eastern's total traffic turnover in 2020 was 14,217 million ton-km, or 17.8%, lower than the other two main state-owned airlines, Air China and China Southern Airlines. China Eastern faces relatively strong competition, and the threat of existing competitors is high. As of the end of 2020, the main operating and financial indicators of the three major domestic airlines are set out in the table below,

Projects	Air China	China Eastern	China Southern Airlines
Operational indicators			
ASK (billion passenger kilometers)	152.45	160.69	213.92
Fleet size (aircraft)	746.00	758.00	878.00
Aircraft utilization per day (hours)	6.28	6.66	6.96
Average seat occupancy rate (%)	68.63	67.71	71.25
Average load factor (%)	55.53	55.42	63.28
Fleet size (aircraft)	746.00	758.00	878.00
Financial Indicators			
Total assets (RMB billion)	298.38	286.55	322.95
Operating income (RMB billion)	74.53	67.13	101.64
Total profit (RMB billion)	(21.83)	(17.51)	(13.90)
Net cash flow from operations (RMB billion)	7.13	5.69	7.69
Gearing ratio (%)	77.94	80.84	73.85

Table 2 The main operating and financial indicators

Source: Annual reports for Air China, China Eastern and China Southern Airlines

Internationally, the international airline industry has entered an era of "mass" development, with increasing concentration in the airline market and intensifying competition in the global airline industry. In research from Brand Finance (2021), Delta topped the list of 'Top 10 Most Valuable Brands' with a brand value of \$5,770m, followed by American Airlines and United Airlines in third place. China Eastern Airlines was ranked 8th, below Air China at 6th and China Southern Airlines at 7th. This shows that there is still a gap between China Eastern Airlines and other national airlines, and the company is under pressure to compete on international routes.

## 6.2 Threat of potential entrants

Due to the huge investment in the air transportation industry, which is highly capital,

technology, and risk intensive and has a long payback period, the government's tighter restrictions on the qualifications of air transportation subjects and high market entry barriers, coupled with historical reasons, have led to the formation of a certain monopoly in the air transportation industry in the course of development. Overall, the barriers to entry the China's civil aviation transportation market are high, and stronger barriers to entry reduce the number of potential entrants, and China Eastern, as far as we can tell, confronts a low danger of possible entrants.

### 6.3 Bargaining power of suppliers

Airplane producers, fuel oil companies, food channels, logistics providers, and distributors are all main players in the civil aviation transportation chain. High-end vendors and ordinary vendors, with distinct bargaining strengths, are two different sorts of suppliers.

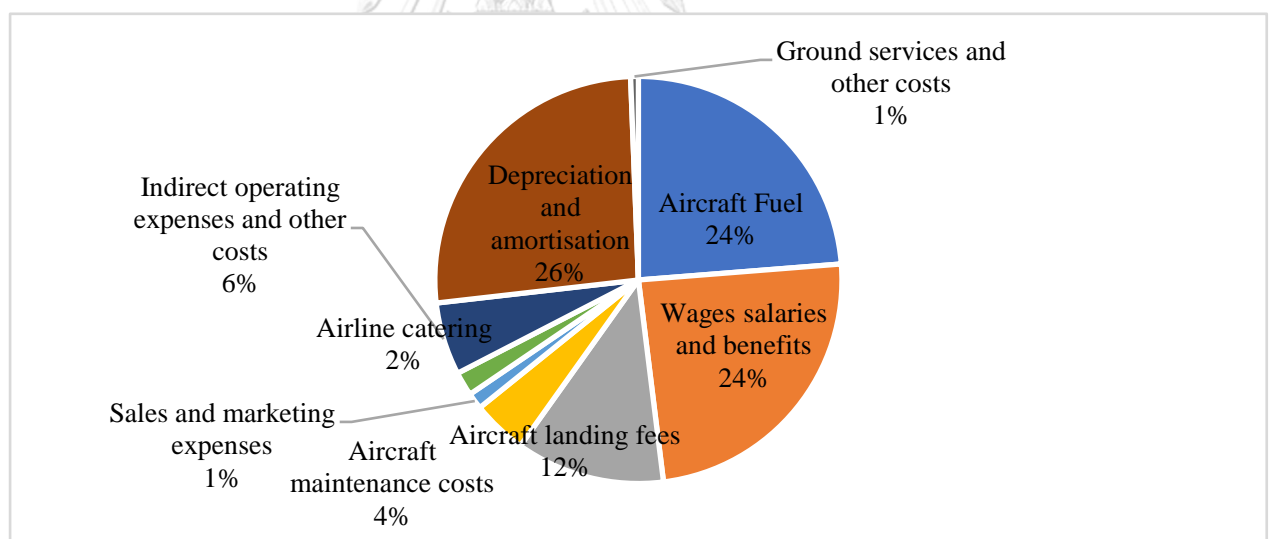


Figure 7 Components of operating costs in 2021

Source: CEA Annual Performance Report 2021

#### (1) High-end suppliers

Significant technological requirements and high operating costs characterize the air transportation industry. Because critical business resources including as aircraft, engines, aircraft materials, fuel oil, and technical services are only available from a small number of suppliers, airlines usually adopt a centralized procurement approach to obtain operating



resources to reduce operating costs. The airport is built by the local government as a stopping point for airline aircraft. Therefore, the bargaining power of air transport companies is extremely limited. The Company's operating results are heavily influenced by the supply and cost of aviation fuel. In 2021, fuel costs accounted for 23.7% of the Company's operating costs. The fuel required for the domestic market is mainly purchased from the branches of the Civil Aviation Fuel Corporation of China in various locations. The General Administration of Civil Aviation sets a uniform price based on market and other conditions. China Eastern's bargaining power is weak.

#### (2) General suppliers

Food, logistic, and distribution companies are considered common suppliers since the items or services they provide are of low technical content and there are many suppliers for the company to choose from, which is a buyer's market and therefore the bargaining power is low.

In summary, high-end suppliers have strong bargaining power and common suppliers have weak bargaining power. However, in terms of overall costs, high-end suppliers account for up to 85% of the company's total operating costs, so for China Eastern the overall supplier bargaining power is stronger.

#### **6.4 Bargaining power of purchasers**

With a huge number of airlines to select from, China's passenger transportation business has become a buyer's market. Internet is widely believed to have lowered search costs, facilitated competition, and made cheaper offerings available to buyers (Sengupta & Wiggins, 2014). Competition among airlines is fierce and this has led to a low-price strategy and considerable bargaining power for purchasers.

Purchasers could be categorized into two parts: business travelers and vacationers, with former traveling primarily for business purposes and the latter for visiting purposes, with

different requirements for time and quality of service and ultimately different bargaining power. Business travelers are less price-sensitive and are less concerned about the price of the ticket, but more concerned about the flight time and quality of service, so they have less bargaining power. Casual travelers spend their own money on tickets and are therefore more price-sensitive and can schedule their flights as per pricing. At the same time, this sector has a large number of customers who are less devoted to a specific airline and prefer to compare prices, giving them more bargaining power.

### **6.5 Threat of substitutes**

China's high-speed railway mileage crossed 40,000 kilometers by 30 December 2021, ranking first in the world, and China's overall railway mileage topped 150,000 kilometers, ranking second in the world (People's Daily, 2021). With the expansion of China's high-speed railway network, high-speed railways have had a considerable impact on air transport diversion in the shorter distance market of less than 3 hours and less than 800 kilometers, due to their high punctuality and frequency, as well as comparatively low passenger-kilometer prices. With the improvement of China's high-speed railway network, high-speed railways, with their high punctuality and frequency, and relatively low passenger-kilometer fares, have had a significant impact on air transport diversion in the shorter distance market of fewer than 3 hours and less than 800 kilometers. According to the latest statistics from the Aviation Safety Technology Centre of the Civil Aviation Administration, routes with annual passenger traffic of over 500,000 are mainly located in the east-central region of China, with the density of the network decreasing from east to west. The high-speed railway network currently under construction is mostly concentrated in the east-central region, which creates direct substitution and competition with the civil aviation market. As Hensher, Wei, Beck, and Balbontin (2021) found that Covid-19 has led to people traveling more by car than by public transport, such as using driving instead of many short-haul air journeys.

Rail, road transport and air transport are somewhat alternative in terms of short and

medium distance transport. In terms of short-distance transport, the substitution effect of high-speed rail is becoming increasingly significant and poses a greater substitution threat to civil transport companies. With the impact of rail and road transport on the domestic civil aviation market becoming a regular and networked trend, routes along the high-speed railway will be affected by diversion to a certain extent. On some routes, China Eastern may encounter increased competition in the future.

## 6.6 Summary

The political, economic, social, and technological environment in which China Eastern is currently operating is supportive of its future development. Existing competitors and substitutes pose a threat to China Eastern's future development to a certain extent, and competition is fierce, and China Eastern still has a long way to go to stand out and take the top spot. China Eastern needs to further consider its medium and long-term development plans, take advantage of current political, technological and other external factors to maintain its core competitiveness, and actively respond to external threats.

## 7. SWOT analysis

China Eastern must have a clear understanding of its strengths and weaknesses, and also the opportunities and threats it confronts, in order to navigate the increasingly competitive airline market.

### 7.1 Strengths

- 1) High market share and a nationwide and global air transport network layout

China Eastern, as one of China's three main airlines, has a considerable market share in air travel, accounting for 17.8% of the entire market in 2020. The company has created and enhanced a national and worldwide air transportation network with accessibility to 170 countries and 1,036 locations owing to its collaboration with SkyTeam members. Domestically, the company has 790 routes to 184 destinations in 34 provinces and regions in

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China.

2) Good brand identity

Through its efforts over the years, China Eastern has built a high-quality brand reputation within the industry and has won many important honors. WPP has put it in the top 50 most valuable Chinese brands for the past eight years; Brand Finance has included it in the "Top 500 Global Brand Value" for the past four years; and it has been listed in the "Top 20 Overseas Image of Chinese Enterprises" for the last three years.

3) Locational advantages, with a uniquely advantageous hub

The company's core hubs are Shanghai and Beijing, which are highly developed economies with strong travel demand; Kunming, which is the gateway to Southeast Asia; Xi'an, which is the gateway to the northwest of the country's "Belt and Road" initiative; and Guangzhou, Shenzhen, Chengdu, Nanjing, Hangzhou, Qingdao, Wuhan, and Xiamen, which are the key trunk networks.

4) A high-quality customer base and excellent business partnerships

The Company keeps an overall positive effect and service standards, and passenger loyalty was increased, with the amount of "Eastern Miles" frequent - flier members reaching 48.15 million by the end of December 2021, an increase of approximately 6.5% year-on-year. China Eastern has formed global strategic partnerships with Delta and KLM through capital alliances and business cooperation and has code-shared with Air Europa (IATA code UX), CSA Czech Airlines (IATA code OK), Jet Airways (IATA code 9W), and Air Mauritius (IATA code MK). Air Mauritius (IATA code MK) is code shared. in domestic aviation, strategic cooperation with Juneyao Airlines was launched through the "equity + business" model to further enhance the company's service capacity at its main base in Shanghai. Over 1,100 code-share flights were added with Sichuan Airlines, Juneyao Airlines, and Xiamen Airlines.

## 7.2 Weaknesses

### 1) High financial leverage

The air transportation industry is capital-intensive and capital expenditures such as aircraft acquisitions are mainly financed by bank loans and finance leases in addition to partly from its funds, resulting in generally high levels of gearing for aviation companies (Li, 2014). As of the end of 2019, 2020, 2021, and March 31, 2022, China Eastern's gearing ratio (on a consolidated basis) was 75.12%, 79.85%, 80.84%, and 83.56% respectively, showing a continuous upward trend (CEA, 2020; CEA, 2021; CEA, 2022). The relatively high level of gearing due to the outbreak of Covid-19 in early 2020 may lead to certain debt servicing pressure on the Company, especially under the impact of Covid-19, which has increased the short-term risk and uncertainty of the Company.

### 2) Pressure on capital expenditure remains

Due to the asset-heavy nature of the airline, the company will still invest a large amount of money in aircraft acquisition and base construction in the coming years, and the pressure on capital expenditure will remain. On May 10, 2022, China Eastern announced to raise funds totaling no more than RMB15 billion, of which the controlling shareholder, China Eastern Airlines Group, intends to subscribe no less than RMB5 billion. The planned RMB10.5 billion will be used for the introduction of a 38-aircraft project and RMB4.5 billion is intended to be used to supplement working capital (CEA,2022).

### 3) Lack of differentiation

Currently, the brand differentiation of domestic airlines is slow and homogeneous. Compared with domestic airlines, China Eastern does not have many advantages in terms of products and services and therefore does not have an obvious advantage in attracting customers when supply exceeds demand in the airline market.

### 7.3 Threats

#### 1) Uncertainty arising from the impact of the epidemic

The worldwide epidemic's development is still unknown, and China's external defense input is under increasing strain. As ICAO (2022) has noted, "China domestic passenger traffic experienced significant volatility during the recovery course due to the renewed outbreaks". The epidemic remains the biggest uncertainty affecting the industry's recovery.

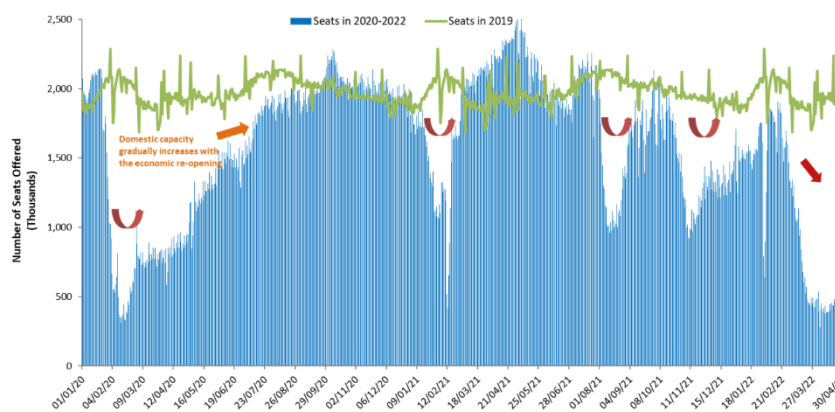


Figure 8 Volatility of China domestic passenger traffic

Source: ICAO ADS-B operation data

#### 2) The impact of geopolitical conflicts

According to IMF (2022) Managing Director Kristalina Georgieva, a major new issue arising from the Russia-Ukraine conflict is that the world could split into different "economic blocs", creating obstacles to the cross-border movement of capital, goods, services, and so on. There is a rising risk of fragmentation of the international payments system. Meanwhile, a geopolitical risk exists: some countries may consider establishing parallel, independent payment systems to mitigate the risk of potential economic sanctions. Geopolitical concerns and economic policy uncertainties have a considerable impact on oil market price volatility (Wang, Y., Wei, M., Bashir, U., & Zhou, C., 2022). Geopolitical conflicts lead to higher fuel prices, increasing the cost burden on airlines.

### 3) Economic globalization hits headwinds

"The recovery of the global economy continues but has slowed down owing to new Covid-19 variants and is now facing a major setback from the war against Ukraine and its ramifications, which will amplify existing challenges." according to IMFC (2022), "The resulting surge in energy and food prices has added to inflationary pressures, while supply disruptions have further intensified, and financial markets and capital flows are exhibiting increased volatility."

According to the World Bank (2022), Ukraine's economy is predicted to contract by 45.1% for the year, Russia's economy is already in a deep depression, with a forecasted 11.2% contraction in output in 2022. As WTO (2022) has claimed, "Using a global economic simulation model, the Secretariat projects that the crisis could lower global GDP growth by 0.7-1.3 percentage points, bringing growth to somewhere between 3.1 percent and 3.7 percent for 2022. The model also projects that global trade growth this year could be cut almost in half from the 4.7 percent the WTO forecasted last October to between 2.4 percent and 3 percent." The Russia-Ukraine conflict causes a huge setback to global economic recovery. Major developed economies' macro policy regressions may be accompanied by financial risks. The time it will take to recover from the economic and industrial damage caused by the outbreak may be longer than expected.

## 7.4 Opportunities

### 7.4.1 Huge potential demand for civil aviation transport and policy support

According to the CAPSE (2020) survey, after the Covid-19 is over, arranging a trip is the most important thing travelers want to do, followed by exercising for a healthy life and working full time; Europe and Japan are the most popular destinations for travelers after the global epidemic is over, while Hainan and Yunnan are preferred by travelers for domestic trips. The pandemic prevention and control is more precise and scientific, and air travel is expected to further recover. The central and local governments are expected to further

implement policies to help the aviation industry. China's civil aviation "14th Five-Year Plan" was released, and there is huge potential for the development of China's civil aviation. China's economy is robust, and its long-term positive fundamentals will not change. With growing per capita GDP and disposable income, the potential for air travel is expected to be further released.

#### 7.4.2 Transformation opportunities for Air cargo

China continues to expand high-quality foreign trade, which will benefit international trade and commerce in the post-epidemic era. Air cargo sees transformation opportunities like e-commerce and foreign trade accelerate under epidemic

### 7.5 Summary

Through the above analysis of China Eastern's strengths, weaknesses, opportunities, and threats, it is believed that the company should seize external opportunities and avoid external threats. Meanwhile, it should continue to utilize its strengths and make up for its weaknesses as much as possible. Take advantage of its fleet and hubs in Shanghai, Beijing, Xi'an, and Kunming to further expand value-added services, introduce special products, enrich passenger choices, and increase revenue from ancillary businesses. Leverage its fleet and route advantages to provide a comfortable in-flight environment to attract new customers.

At the same time, China Eastern Airlines should also take measures to make up for its shortcomings. First, it should launch differentiated products; second, it should innovate more forms of promotional activities and increase the strength of these activities; third, it should further promote the integration of business and finance, enhance its risk control ability, improve its profitability, and provide a financial guarantee for the improvement of service quality.

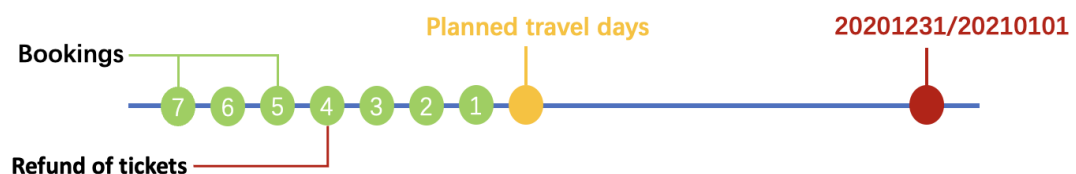


## 8. Significant civil aviation industry products under the epidemic

Since the outbreak of Covid-19, the global civil aviation industry has been in a "winter" predicament. Domestic airlines have relocated capabilities to the domestic market. In terms of the epidemic and restrictions on cross-border journeys, and competitive pressure on domestic flights has intensified. Faced with this crisis, China Eastern hopes to break the deadlock through product innovation and increase revenue from domestic routes.

### 8.1 Product: Fly at Will 1.0: Wild Your Weekends

China Eastern has launched the first "Fly at Will 1.0: Wild Your Weekends" in the entire civil aviation sector since the online shopping festival on June 18, 2020, which overshadowed the major e-commerce websites. The initial generation of "Fly at Will" is available for a limited time at a special price of RMB 3,322 and can be purchased by passengers on their App, with a maximum of 10 sets available until sold out. Passengers who purchase and activate the product will be able to fly to any major city in China on any Saturday or Sunday in 2020, except Hong Kong, Macau, and Taiwan, with unlimited flights on China Eastern and Shanghai Airlines. With less than half of 2020 left, this "Wild Your Weekends" is a half-yearly airline ticket that can only be used on weekends.



People who live, work, and study apart, as well as high-frequency groups like travel enthusiasts, photographer hobbyists, and middle-aged and seniors tour groups, are all target groups.

### 8.2 Product: "Fly at Will" series

On August 6, 2020, China Eastern also launched version 2.0 - "Wild Your Morning and Night", a morning and evening flight package from Monday to Friday. The product will first

be sold to enterprises and institutions through China Eastern's marketing staff and financial institutions and will then be made available to the public later. Enterprises and institutions are limited to 100 sets of the product for a single purchase, and the bound passenger must be an employee of the corresponding enterprise. However, the product is only available for flights before 8 am and 8 pm and beyond and is not available during the Spring Festival. This "Fly at Will 2.0" package is aimed at the average businessperson and companies on a budget.

### **8.3 Similar products from other airlines**

China Eastern is not the first airline to introduce the "infinite flight" concept. To survive and stimulate passenger traffic in the light of the weak global aviation demand caused by the epidemic, numerous domestic airlines have also rushed to market with similar offerings. "Happy Flying" was launched by Southern Airlines, one of three main domestic airlines, Hainan Airlines, a large private airline, launched "Hi Shopping FTZ" in response to the establishment of Hainan FTZ, Spring Airlines, a low-cost airline, launched "Fly When You Want", and Juneyao Airlines, which participated in the mixed-ownership reform of China Eastern, launched "Unlimited Upgrade Card".

In the case of the epidemic, several overseas airlines have introduced "infinite flight" products, such as the AirAsia "Infinite Pass" in late February, which allows passengers to pay RM499 (about US\$118) for unlimited flights to and from Kuala Lumpur and destinations in Australia, Japan and India for a full year (2 March 2020 to 2 March 2021). For US\$93, passengers can enjoy unlimited flights within Malaysia's domestic network.

### **8.4 Summary**

In this competitive series of "Fly at Will" products, China Eastern has taken the lead in the market and captured the hearts and minds of passengers with precision. On basis of the various pre-sold flights, China Eastern launched flights with special features in the western region, Daxing, Guangdong, Hong Kong, and Macau. They are open for sale to individual

users and businesses. This is the first time that China Eastern's "Fly at Will" has changed from a time dimension to a space dimension, accelerating regional economic development with an aviation drive, boosting the entire industry chain of air travel services, and helping to build a "big cycle", "double-cycle" new development pattern.

With the use of Internet technology, airlines are no longer stuck to a particular price, a few slots, and a few services in the process of moving towards a mass-market but are making full use of various market resources to combine and split. For example, upstream and downstream connections, third-party partnerships, ancillary services, live commerce, OTA platforms, branded tariffs, etc. This flexible combination model has proven its usefulness in dealing with unfavorable factors and mitigating risks in the market. The "Fly at Will" campaign is a marketing initiative, but it is also a means to effectively respond to the impact of the epidemic.

## **9. CEA Air cargo development under the impact of the epidemic**

### **9.1 Relatively good cargo performance**

China Eastern's main businesses include air passenger services and air cargo services. Eastern Airline Logistics Co., Ltd. ("Eastern Logistics") and China Eastern are controlled by the same parent company. China Cargo Airlines Co., Ltd. ("China Cargo") is a non-wholly owned subsidiary of Eastern Logistics, adopts an exclusive operation approach, and independently operates and manages China Eastern's passenger aircraft cargo business. This includes conventional passenger aircraft belly cargo business and non-conventional passenger aircraft cargo business.

China Cargo's professional operation of passenger air cargo business has brought into play the capacity synergy of all-cargo plus passenger air cargo, as well as the business chain synergy of cargo plus warehousing, resulting in the long-term stable growth of China Eastern's

passenger air cargo revenue. As can be seen from the table below, cargo revenue is a significant component of China Eastern's net profit.

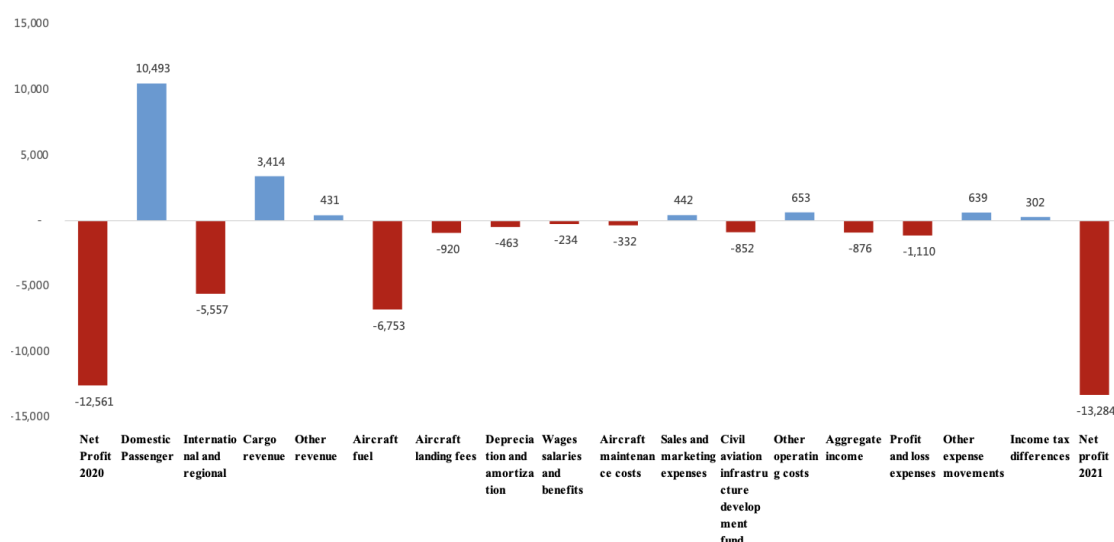


Figure 9 Change in net profit for 2021(RMB millions)

Source: CEA Annual Performance Report 2021

As WTO reported, new health regulations have caused disturbances in the transport of goods by land, sea, and air. International transportation and logistics services, which are critical to e-commerce and traditional trade transactions, have been severely impacted. More than one million of the passenger flights usually used to transport postal cargo and other small consignments have been canceled, cutting capacity significantly and raising transport prices for cross-border B2C and B2B transactions. Administrative and supervisory bottlenecks and quarantine conditions for crews have exacerbated the problem, making it impossible for cargo flights to match demand (2022).

International flights were reduced significantly, and the utilization scenario of wide-body aircraft was limited. China Eastern capitalized on the cargo market demand by enhancing cooperation with Eastern Airlines Logistics, based on variations in passenger and freight market requirements during the epidemic. a subsidiary of China Eastern Airlines Group, to increase the investment in non-conventional flights, expand air cargo business and boost the

air cargo revenue. In 2021, the air cargo business grew notably, with cargo and mail turnover increasing by 15.8% year-on-year to 105.7% that in 2019. In 2021, there were 15,306 non-conventional flights, with a total of RMB8.31 billion in non-conventional passenger flights and bellyhold revenue, an increase of 69.7% year-on-year.

The three main reasons for the relatively good performance of air cargo in the face of the epidemic crisis were: air cargo was critical to maintaining the global supply chain and transporting medical equipment and medicines; air cargo played a key role in the transportation of the Covid-19 vaccine, the increased demand for air cargo was driven by the demand for the Covid-19 vaccine. The global economy is recovering with e-commerce and manufacturing developing more rapidly (Lu, Meng, & Zhang, 2021).

## **9.2 Problems faced by air cargo**

By the end of 2021, China's civil aviation industry had registered 4,054 transport aircraft, with 198 cargo aircraft accounting for less than 5% of the total. Eastern Airlines Logistics, a subsidiary of the China Eastern Airlines Group, has only 11 all-cargo aircraft, which is small in scale, still lacking in key service capabilities, lagging behind in full-chain services, inadequate support for overseas service guarantees, has not yet achieved independent control of its international all-cargo network, and cannot better meet emerging consumer demands such as cross-border e-commerce and cold chain transportation, and does not have enough synergy and connectivity with advanced manufacturing industries.

The modern concept of air freight is no longer about transferring goods from one airport to another in the traditional sense but is a comprehensive logistics solution that needs to work together with sea and road transport to provide a quality service to customers. The indicator system of the air cargo industry is imperfect, and the level of information technology varies, so China Eastern needs to strengthen the construction of information technology and improve its capabilities. The information system of each main body of air logistics is relatively

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independent. Eastern Airlines Logistics can comply with the policy to promote the unification of data interfaces, formats and information exchange standards within the industry and strengthen information sharing; establish a data-sharing mechanism to achieve data interconnection and interoperability to support the chain-based operation and supervision of Eastern Airlines Logistics.

## 10. Conclusion

During the epidemic, China's government implemented a variety of reforms to aid the recovery and improvement of the country's civil aviation industry, and China Eastern had also responded by innovating, meeting challenges, and continuing to seek out new opportunities. The 'Fly at Will' products face many challenges, with a high degree of homogeneity and competition among airlines. But it is still an effective attempt by the civil aviation industry to deal with the impact of the epidemic, and IATA (2022) states that the domestic market in China will fly close to 20% of the global RPK in 2020, up significantly from around 10% in 2019. For the first time, domestic China will be the largest domestic air travel market.

At the same time, air cargo is seeing opportunities and challenges. We see from the financial data of China Eastern and the policies introduced in China that China Eastern has seized this window and achieved growth, but it is still in the early stages of its development, with insufficient capacity, technology needs to be innovated, the industry needs to be upgraded and it needs to improve its competitiveness in the international air cargo market.

## 11. Strategic Management

The paper uses PEST, SWOT, and Porter's Five Forces to analyze the situation. The content includes internal environmental analysis, external environmental analysis, and competitor analysis. The macro and micro environments, as well as competition, are studied inside the external environment analysis. In a global environment, the PEST constitutes the

major macro factors which influence the entity.

Political environment	<ol style="list-style-type: none"> <li>1. Supporting policies to ensure the stable development of civil aviation by Chinese government</li> <li>2. 14th Five-Year Plan for Civil Aviation Development</li> </ol>
Economic environment	<ol style="list-style-type: none"> <li>1. Sustained growth in GDP</li> <li>2. Disposable income per capita rising year on year</li> <li>3. Fixed asset investment in the civil aviation industry increasing year on year</li> </ol>
Social Environment	<ol style="list-style-type: none"> <li>1. Low willingness to travel</li> <li>2. The epidemic boosts the online economy and air cargo</li> </ol>
Technology environment	<ol style="list-style-type: none"> <li>1. industry-wide technical improvements.</li> <li>2. "Made in China 2025" puts forward a "three-step" strategy for the construction of a strong manufacturing country in China.</li> </ol>

Table 3 PEST analysis

The micro-environment affects the industry in which the company operates, and it is analyzed using Porter's five forces framework.

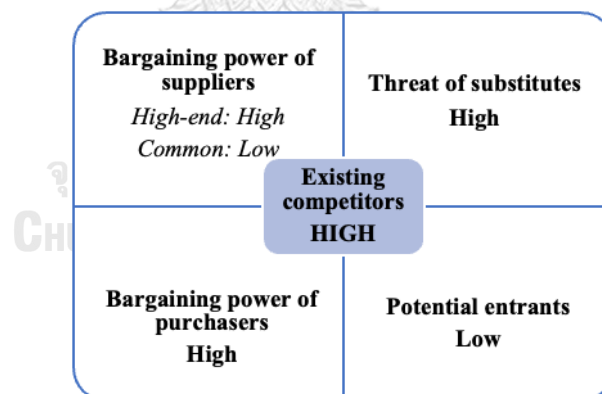


Figure 10 Porter five force

Another uncontrollable external force that has an impact on the company is competition. The SWOT analysis is used to determine the organization's strengths, weaknesses, opportunities, and threats. It reveals the company's current market position.

<u>Internal environment</u>	Strengths	Weaknesses
	<ol style="list-style-type: none"> <li>1. High market share, wide range of air transport network layout</li> <li>2. Good brand identity</li> <li>3. Locational advantages, with a uniquely advantageous hub</li> <li>4. High-quality customer base and excellent partners</li> </ol>	<ol style="list-style-type: none"> <li>1. High financial leverage</li> <li>2. Pressure on capital expenditure remains</li> <li>3. Lack of differentiation</li> </ol>
<u>External environment</u>		
Opportunities	SO strategy	WO strategy
<ol style="list-style-type: none"> <li>1. Huge potential demand and policy support</li> <li>2. Transformation opportunities for Air cargo</li> </ol>	<ol style="list-style-type: none"> <li>1. Grasp the hot spots, enrich the product selection, and explore the needs of potential customers</li> <li>2. Actively enhance air cargo capacity and seize the air cargo market</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase revenue from ancillary businesses</li> <li>2. Innovate more forms of promotional activities and increase the strength of these activities</li> <li>3. Launch differentiated products</li> </ol>
Threats	ST strategy	WT strategy
<ol style="list-style-type: none"> <li>1. Uncertainty arising from the impact of the epidemic</li> <li>2. The impact of geopolitical conflicts</li> <li>3. Economic globalization hits headwinds</li> </ol>	<ol style="list-style-type: none"> <li>1. Prepared for international cooperation in the long term to prevail over the epidemic</li> <li>2. Absorb high-quality assets from overseas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Promote the integration of business and finance, enhance its risk control ability, improve its profitability</li> <li>2. Reducing costs and consolidating resources</li> <li>3. Financial guarantees for improvements</li> </ol>

Table 4 SWOT analysis

## 12. Future recommendation

### 12.1 Passenger Operations

Due to the epidemic, self-guided travel has become one of the main forces of travel, and OTAs such as Ctrip and Fliggy, which can provide booking services for air tickets, hotels, car



rentals, and attraction tickets, have become the first choice of customers. The airline's app is far less convenient than the major business travel platforms. China Eastern must increase its localized product development efforts and cooperation with local "food, accommodation, transportation, entertainment, tourism and shopping" industries to provide competitive airfares, improve the experience of using China Eastern's app and enhance customer stickiness.

Improve the use of Big Data technology. Analyze the customer information accumulated during long-term operations. Profile customers to find travelers' pain points and real needs and differentiate them according to target market segments to improve the customer experience. According to new research, the share of outdoor adventurers, families, and small-town youth groups is increasing among Chinese travelers, and travel expenditure by rural travelers is growing faster than that of urban travelers (ICLK & EY, 2022). Analyze market dynamics and development trends, take advantage of China Eastern's extensive market presence and many branches in the mainland, take advantage of the continued development of international hubs in Beijing, Shanghai, Guangzhou, and Haikou, tap into hinterland market resources, take the initiative to explore new demand to grasp hot spots and create demand. Such as duty-free shopping tours, family tours, outdoor sports tours (skiing, etc.), student tours, air + hotel + travel packaged products, etc. Learn new marketing models such as live selling and selling tickets through live streaming on special days such as 3.8, 5.20, 6.18, Double 11, and New Year's Eve.

In the post-epidemic era, China Eastern needs to be prepared for international cooperation in the long term to prevail over the epidemic. Given the long recovery time of the market, the airline has implemented internal cost control and external backup measures, prudently assessed the influence of the pandemic on passenger and cargo flights, and implemented additional cost-cutting measures like the simplification of aircraft types (elimination of old types of planes as well as those with poor economic performance), service

optimization and divestiture of non-performing resources, and strengthened discussions with passenger and cargo airline partners to jointly negotiate the contingency planning for route association and client service, and made every effort to minimize the loss of passenger and cargo operations. The Company shall also refer to the huge success in cutting costs, consolidating resources, and progressively promoting the growth of both the international passenger and cargo markets.

Respond to changes in the global industry's rivalry. The Company should remain sensitive to variations in the competitive environment of regional markets, promptly respond on and change global relationships, promote the capability of frequent flyers and business clients in international markets, explore customer resources in foreign airlines' Chinese segment, and invest in major markets and essential airline companies at an opportune time to absorb high-quality assets from overseas.

## **12.2 Air cargo operations**

The main mode of cargo and mail transportation for China Eastern is the belly of passenger aircraft, with limited cargo aircraft and a low level of specialization. As a subsidiary that undertakes the cargo business of China Eastern, Eastern Logistics can increase its fleet of cargo aircraft by leasing or purchasing in order to increase the size of its fleet, develop all-cargo aircraft and build an independent and controllable international air cargo corridor.

As Tai, Liu, X, Q., and Liu, X. (2021) point out in their study of air logistics in the post-epidemic era, as markets expand and consumer demand rises, air cargo as a mode of transport can no longer fill the space corresponding to the air sector of the modern logistics system. Large manufacturing enterprises, leading trade enterprises, and many e-commerce platforms in this domain space are the planners of air logistics, air transport enterprises such as China Southern Airlines, China Cargo Airlines, and China National Cargo Airlines and

logistics companies such as SF Express are typical capacity providers, and airports, ground transport units, freight forwarding enterprises, consumers and many other participants together form the air logistics supply chain.

China Eastern should pay close attention to the resumption of work, adjust its sales strategy, strengthen its large customer service and promote a diversified network of transshipment products for transportation to seize opportunities. Introducing supply chain management ideas, maximizing the benefits of high efficiency and quality in air transportation, and making full use of the corresponding infrastructure facilities, China Eastern must innovate its business model and extend to both ends of the air logistics chain. Combine with related industries in the outside world for synergistic development, connect upstream and downstream to transform into an aviation logistics service provider, strive for relevant subsidies and support policies, and actively realize the transformation from a simple capacity provider to a comprehensive supply chain logistics service provider. To reduce costs, promote development, improve efficiency and ensure quality, to achieve a win-win situation for all participants in aviation logistics.

China Eastern should improve its pandemic control and prevention, organizational production stability, operational management system optimization, cost reduction, and product structure adjustment, form cooperative alliances, utilize the Internet+ and accelerate the iterative upgrading of its air transport products. Develop revenue from ancillary businesses, layout early, and cooperate across borders.

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## VITA

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