



A Comparative Analysis of Business Strategies between Full Service Airlines and Low Cost Carriers in Korea*

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Abstract

Purpose: Establishing a competitive advantage in the aviation market is essential as the competition among domestic airlines intensifies. Therefore, this study examined the management strategies of both large domestic airlines and low-cost airlines. **Research design, data, and methodology:** This study classified domestic airlines into Full Service Airlines (FSA) and Low Cost Carriers (LCC), examined each airline's current status and characteristics, and conducted case analyses of FSA and LCC based on Porter's generic competitive strategy. **Results:** The analyses determined that LCC primarily implemented a cost-advantage strategy, and FSA implemented a differentiation strategy. However, as competition intensified, FSA pursued cost-advantage strategies while establishing LCC through subsidiaries. There are various specific cost reduction methods, including service simplicity, scalability, high utilization, low landing fees, low-cost unit, and point-to-point flight strategies. **Conclusions:** LCCs are focusing on cost advantage strategies that reduce costs; however, the FSA also runs special price events that are as good as LCCs and are comparable to LCCs on some routes. Furthermore, LCC has recently expanded its mid- and long-distance routes, making competition for long-distance routes with major airlines unavoidable.

Keywords : Full Service Airlines, Low Cost Carriers, Cost Advantage Strategy, Differentiation Strategy, Focus Strategy.

JEL Classification Code : F20, F23, M10, M15.

1. Introduction

As regulations on prices, market entry, and services in the air transport industry were removed in the 1970s, consumers' choices gradually expanded and were segmented, owing to numerous new airlines entering the market. By eliminating inefficient airlines and promoting the development of the aviation industry, this openness

and liberalization of the aviation market benefits consumers by allowing them to enjoy benefits such as product differentiation and price competition.

Full Service Airlines (FSA) and Low Cost Carriers (LCC) have started to compete in Korea since the latter's debut in 2005 with the introduction of "low fares" and the "popularization of air travel." It was anticipated that the entry of LCC FSA would inevitably compete to attract

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passengers. To succeed, FSA established subsidiary low-cost airlines and invested in high-tech facilities that differentiated them from low-cost airlines.

Until recently, LCC sales have been rising steadily. Jeju Air has been growing rapidly, recording 90 million cumulative passengers on domestic and international flights for the first time among LCC airlines till July 2022. In the case of foreign airlines, the LCC gradually competed on the same routes as the FSA after initially targeting the niche market of the FSA, whereas the FSA and LCC operated similar routes from the early days, threatening the FSA's existing position. As domestic FSA and LCC operate concurrently, competition among airlines within the domestic aviation industry is intensifying.

The development of all industries can be attributed to the survival strategies of companies, and the aviation industry is one example of a sector fighting for corporate survival. It is no exaggeration to say that a company's survival lies in the hands of its customers. Companies collect customer information, analyze customer data for efficient customer management, and use customer information for marketing or sales strategies through systematic management. The most important step in establishing a management strategy is accurately understanding customer needs. It is natural for a company to have a comparative competitive advantage only when it combines the expected satisfaction factors that can meet the identified needs.

Consequently, as the competition among domestic airlines has become increasingly fierce, gaining a competitive advantage in the aviation market has become inevitable. Therefore, this study classifies existing domestic airlines into FSA and LCC, examines each airline's current status and characteristics, and analyzes them based on Michael Porter's generic competitive strategy to determine the problems and solutions based on domestic LCC.

2. Literature Review

2.1. Definition of Full Service Airlines (FSA) and Low-Cost Carriers (LCC)

2.1.1. Full Service Airlines (FSA)

FSA provide onboard customers with entertainment such as TV, games, and music, as well as additional services such as airport lounges and in-flight meals. All

these services can be provided by airlines that charge relatively higher rates than LCC. Korean Air and Asiana Airlines are the two FSAs operating in Korea. The FSA has various aircraft types and operates on many international routes, including domestic flights over short, medium, and long distances and various additional products. FSA directly or indirectly operates numerous complex fare structures, passenger and cargo transportation; maintenance, aerospace, and duty-free businesses; and in-flight services differentiated by seat class, such as first class, business class, and general class. (Kim, 2016).

Therefore, it is clear that each FSA operates its companies more systematically by forming a corresponding organizational structure that is appropriate for each of these various products. The FSA also plans and operates a route network with a structure that can generate high profits around large hub airports in major cities, rather than alternative airports, compared with LCC. Regarding distribution channels, FSA sells tickets using various distribution channels, including indirect sales using travel agencies, offline direct sales through airline branches, online sales through the airline's website, and sales by affiliated airlines.

2.1.2. Low-Cost Carriers (LCC)

The term "low-cost carrier" is described in English, including budget airlines, low-fare airlines, no-frill airlines, discount airlines, and low-cost carriers, while conventional airlines that do not adopt a low-cost airline strategy are referred to as traditional schedule airlines, network airlines, and full-service airlines. Low-cost airlines can be defined as those providing low fares with low-cost structures through efficient resource allocation (Ha & Lee, 2006).

The first LCC in Korea was gradually established in 2004, starting with Hansung Airlines (currently T'way Airlines). However, the concept of low-cost airlines is unclear; therefore, terms such as "local airlines" and "low-cost airlines" are mixed. Looking at the Korean term, local airlines and low-cost airlines emphasize that they are much cheaper than existing airlines in terms of airfares. LCC refers to airlines that reduce operating costs and consequently lower air fares by improving their operational methods and cost structure to increase productivity and efficiency. Therefore, this study intends to use the term "low-cost carriers" (LCC).

Initially, foreign LCCs launched a management strategy that gradually expanded to the routes of large airlines after targeting the niche market of large airlines. However, Korea's LCC has operated similar routes to the FSA from the beginning, and competition in the limited market is intensifying (Alamdari & Fagan, 2005). The

existing FSA promoted the Hub & Spoke strategy based on a strong network; however, LCC formed a business model by using a single aircraft to reduce maintenance time, maximizing maintenance and utilization rate by using a second airport, reducing airport usage fees, improving the efficiency of cabin crews through limited in-flight services, and generating paid services (In et al., 2009).

The emergence of LCCs in Korea began with Hansung Airlines in 2004. The airline was established in 1971 by benchmarking Southwest Airlines' management policies based on the Dallas area of the United States (Yoon, 2018). Currently, nine low-cost airlines are in operation, including Jeju Air, Air Busan, Air Seoul, Jin Air, and T'way Airlines, as well as the newly established Eastar Jet, Aero-K, Fly Gangwon, and Air Premia.

The emergence of LCC was based on the need for a new competition method as competition in the global air transport market intensified. The airlines that participated in the air transport market were LCC; it differs from conventional FSA as it reduces costs and improves profits through organizational configuration and workforce composition, aircraft type selection, and aircraft operation processes. The resulting profits were used to provide benefits for customers using LCC.

The emergence of low-cost airlines in the domestic air transportation market can be attributed to the fact that Korean Air and Asiana Airlines account for a majority of the domestic air transportation market, leading to an oligopolistic supplier-oriented air transport industry structure in which passengers are not provided with various and appropriate transportation conveniences. In addition, with the opening of the high-speed railway in April 2004, a niche market was created, the facilities of local airports were left idle, and management deteriorated, raising the need for low-cost airlines that can flexibly cope with aviation demand and contribute to the revitalization of local airports (Lee & Kim, 2013).

One of the biggest differences between low-cost airlines and general airlines is their operational strategies. Large airlines are adopting large-scale transportation strategies through the Hub and Spoke method. As one of the forms of air routes, only the representative cities (airports) of each country or region operate as the main base and establish operational routes around the main base airport, which is called a hub and spoke form because it is spread like a bicycle wheel around the hub airport. Thus, it is a method of connecting small routes between the main airport of countries and countries primarily operated by general FSAs that value networks. Large airlines form an aviation alliance (Sky Team, Star Alliance, etc.) to maximize this Hub and Spoke strategy.

However, LCCs are adopting the point-to-point

method instead of the hub and spoke method. This method is a direct route from the starting point to the destination without a separate transfer. Since there is no hub, the entire flight route is complicated, much like a spider web, but this method has the advantage of allowing you to focus only on routes that make money and reduce operating costs because it is a direct flight. There is no need to cling to economies of scale, such as the hub and spoke method.

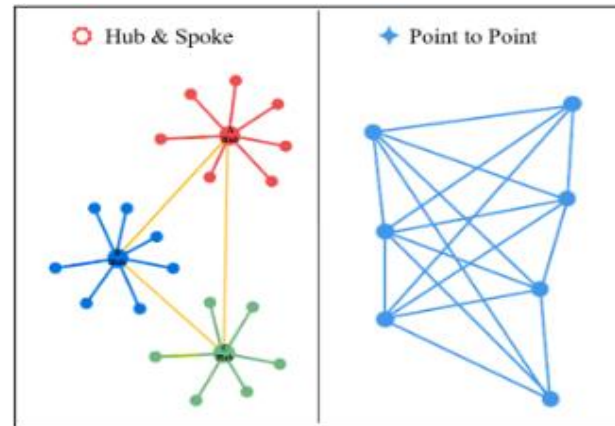


Figure 1: Differences of Flight Strategy

2.2. Overview of Domestic Airline Industry Status

Korea's first private airline, Korean Air, was established in 1969. Twenty years after Korean Air was established, Asiana Airlines emerged in 1988, and the competition system between the two large airlines (FSC) began, which continued till the early 2000s when Korean Air and Asiana Airlines established a two-way system in the domestic aviation market.

However, as LCCs began to emerge worldwide owing to liberalization and deregulation, the aviation market was activated, and starting with Hansung Airlines, which started in 2004, low-cost airlines such as Jeju Air, Eastar Jet, Air Busan, Jin Air, Air Seoul, and Fly Gangwon began to emerge. In 2009, Hansung Airlines applied for a suspension of operations but ended the rehabilitation procedure in 2010. Subsequently, it changed its name to T'way Airlines in July and resumed operations in 2010.

The global air passenger market before COVID-19 had been growing at an average annual rate of 5.4% for 20 years. Economic development, the entry of new airlines because of the deregulation of the aviation industry, and the emergence of LCC based on a low-cost business model have become powerful means of attracting demand to the aviation market due to fare cuts.

The recent COVID-19 outbreak has significantly impacted the world, seriously affecting the global economy. COVID-19 spread so rapidly that the World

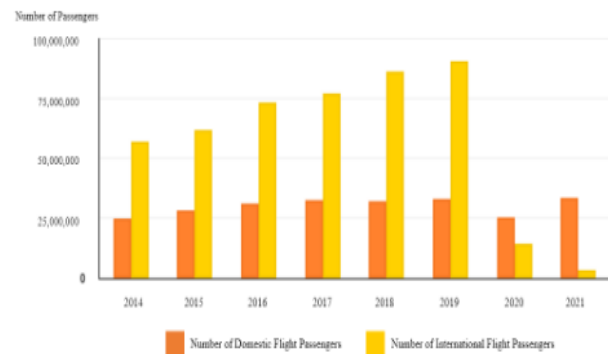
Health Organization declared a global pandemic just three months after it occurred in China in November 2019, seriously affecting the aviation industry because of border controls and restrictions on movement. Despite temporary setbacks caused by regional wars, infectious diseases, and economic crises, the airline passenger market has witnessed steady growth over the past 40 years. The global aviation market, however, is already experiencing a shock never before witnessed as a result of COVID-19, with a 50%–60% decline in passenger traffic in the first quarter of 2020 compared to the previous year.

2.2.1. The Trend of International Flight Passengers in Domestic Airlines

The number of international air passengers had been steadily increasing since the liberalization of overseas travel from 1989 to 1996 but had decreased significantly (15.0%) because of the foreign exchange crisis and the global economic downturn in 1998. International passenger traffic increased after 1999 but decreased subsequently (-5.5%) because of the influence of the Iraq War and Severe Acute Respiratory Syndrome (SARS), along with the September 11 attacks in 2003.

Since 2004, travel convenience has increased because of the increase in international routes, while implementing the five-day workweek and the Korean Wave has increased the number of international tourists. This increase has been maintained because of the increase in the value of the Korean won. The number of passengers decreased for the first time in five years since 2003. It continued to decline until 2009 as international oil prices rose and the value of the won fell because of the economic downturn that started in the United States.

In 2010, international passenger traffic significantly rose 19.5%, reaching 40 million for the first time. This was made possible by the economic recovery of countries like the United States and China, as well as the base effect that had decreased over two years. In 2011, because of the increase in foreign tourism and transfer demand, it increased in all regions except Japan (-7.3%). In particular, European routes increased by approximately 11% year-on-year despite the fiscal crisis in the second half of the year, and Japanese routes shifted to positive growth in November.



Source: <https://www.index.go.kr/>

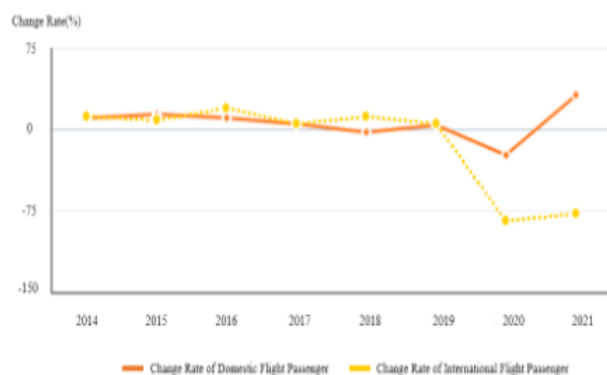
Figure 2: Changes of the Number of Flight Passengers

From 2012 to 2014, it recorded the highest performance ever, which was attributed to the increase in free travelers, the expansion of LCC, and the Korean Wave. In 2015, despite the impact of the Middle East respiratory syndrome (MERS) outbreak, the number of Koreans traveling abroad surpassed 60 million owing to the expansion of LCC-oriented operations and the impact of new routes and exchange rates.

In 2016, the number of foreign tourists increased, and the demand for travel by Koreans increased owing to the non-imposition of fuel surcharges and the expansion of air operations, surpassing 70 million, up 18.8% year-on-year. In 2017, despite a drop in demand due to China's THAAD issue and North Korea's nuclear issue, the number of passengers surpassed 76.96 million year-on-year, up 5.4%.

Because of the spread of COVID-19 in the second half of 2020, the number of air passengers fell by 84.2% from the previous year to 14.24 million, and in 2021, the number of air passengers decreased by 77.4% in the previous year to 3,209,364 compared to 2019.

COVID-19 has had a serious impact on the aviation industry beyond the effects of SARS and MERS (Park & Sohn, 2020). In April 2020, the available seat kilometers of airlines worldwide were down 87.0% year-on-year (IATA, 2020). As each country closed its borders and enforced travel restrictions, the number of available seat kilometers (ASK) on international flights plunged, and domestic flights in the Asia-Pacific region (China, Vietnam, and Korea) have recovered somewhat since April 2020. Revenue passenger kilometers, representing airline profitability, decreased by 94.3% year-on-year worldwide in April 2020, with a total passenger occupancy rate of 36.6% (IATA, 2020).



Source: <https://www.index.go.kr/>

Figure 3: Change Rate of Flight Passengers

2.2.2. The Trend of Domestic Flight Passengers in Domestic Airlines

The domestic passenger trend maintained a high growth rate of 14.1% from 1989 to 1997 due to the improvement of the national economy but entered a recovery period after a significant decrease due to the foreign exchange crisis in 1998. Since 2001, as land transportation, such as roads and railways, developed, it shifted back to a decline, and from 2006 to 2008, the decline was stagnant.

In 2009, domestic passengers rose by 6.3% because of an increase in supply owing to the emergence of LCC and the conversion of international demand due to the economic recession. In 2010, domestic passengers recorded the best performance since 2004, when KTX was established. In 2011, because of the increase in Jeju travel demand and the increase in LCC operations, the number of domestic passenger transportation in LCC increased by 3.8% year-on-year, and the passenger share rate also recorded a 41.4% growth.

Domestic passenger volume recorded the highest performance ever from 2012 to 2014 due to the increase in free travelers, the expansion of LCC, and the Korean Wave, and increased from 24.65 million to 27.98 million in 2015 due to increased demand for travel to Jeju Island.

Domestic passenger volume recorded 30.91 million in 2016, an increase of 10.5% year-on-year; in particular, LCC's domestic passenger share rate was 56.8%. In 2017, it recorded 32.41 million people due to the high growth rate of LCC, an increase in domestic supply, an increase in inland routes, and the number of Jeju passengers, which was up 4.8% from the previous year. In 2017, the number of domestic passengers increased by 4.8% year-on-year to 32.41 million due to the increase in domestic supply (3.8%), the high passenger growth rate of low-cost airlines (14.9%), and the expansion of tourism demand in Jeju Island.

In 2018, the number of domestic passengers decreased

because of flight reduction (-1.1%: inland 0.9%↓, Jeju 1.1%↓), and the number of domestic and foreign travelers decreased by 2.5% (2.3% inland↓, Jeju 2.5%↓) compared to the previous year, due to a drop in Jeju travel performance. In 2019, the number of domestic passengers increased by 4.4% (6.2% inland ↑, 4.1% Jeju ↑) compared to the previous year to 32.98 million due to the increase in demand for domestic and foreign travel to Jeju (supply seat ↑).

In 2020, domestic passenger demand, which plunged due to concerns over COVID-19, showed a rapid recovery, and in November (2.94 million people), it grew 2.5% year-on-year. However, owing to the influence of the 3rd wave of the pandemic (late November to December), the number dropped by 23.7% (2.8% inland ↓, 27.2% Jeju ↓) from the previous year to 25.16 million. In 2021, the number of domestic passengers rose 31.7% year-on-year (up 0.5% from 2019) to 33.15 million as demand for domestic travel increased instead of overseas travel, exceeding the previous high of 32.98 million in 2019.

2.3. Generic Competitive Strategy

Michael Porter's book "What is a Strategy?" emphasizes that strategy is important for companies to survive the competition. A generic competitive strategy is a general strategy that can effectively compete within the industry. Porter suggested three generic strategies: cost leadership, differentiation, and focus, that secure high returns on investment, maintain their position in the industry in the long run, and outperform competitors. Each generic strategy can result from consistent choices for products, markets, and differentiation capabilities. The reason it is called "generic" here is that all companies, whether they are manufacturing companies, service companies, or for-profit companies, can generally pursue it.

Generic competitive strategies can be divided into three categories: The first is a cost-advantage strategy. The goal of the cost advantage strategy is to outperform competitors by producing goods at a lower cost. This strategy has several advantages. First, owing to their low costs, cost-leading companies can offer the same product to consumers at a lower price than competitors. When the industry matures, and price competition begins, cost-leading companies can withstand fierce competition better than companies that do not. Companies using this strategy are expected to earn above-average profits for these reasons. However, the fact to consider is how to select and combine products, markets, and differentiation capabilities to achieve a low-cost competitive advantage.

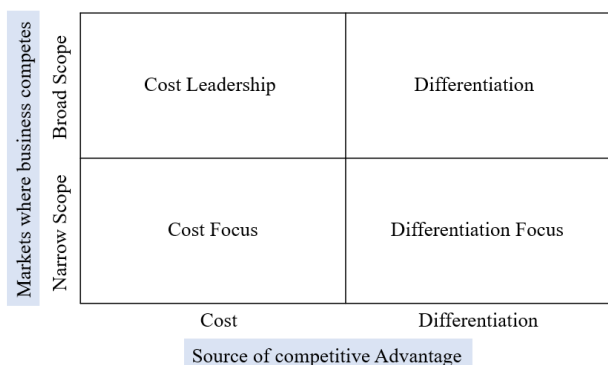
Looking at product differentiation, the level of differentiation is low in the cost-advantage strategy because it is expensive to pursue differentiation by

diversifying and making unique products. Companies seeking a cost advantage seek a level of differentiation that can be achieved at a lower cost but not significantly lower than those pursuing a differentiation strategy. In other words, cost-leading companies do not want to become industry leaders. Cost-leading companies generally do not value market segmentation and, on average, seek product differentiation that targets consumers. Therefore, the products of cost-leading companies may not entirely satisfy consumers. However, consumers seek products from cost-leading companies because they charge lower prices than their competitors. The most important factor for cost-leading companies is developing differentiation capabilities in the manufacturing sector. This is because the price of a product can be lowered by utilizing the strength of manufacturing technology. In addition, this lowered price increases demand and the company's sales volume, which allows the company to lower costs again by utilizing the effect of the experience curve. In addition, efficient material management technology is required to reduce costs. Ultimately, manufacturing and material management are differentiation competencies that cost-leading companies should focus on.

Second, among generic competitive strategies, there is a differentiation strategy. A differentiation strategy aims to achieve a competitive advantage by creating something that a company can perceive as unique across the industry by differentiating its products or services. Thus, companies demand premium prices for consumers in return for differentiation. Premium prices are usually higher than those charged by cost-leading companies. However, consumers believe that differentiated products are valuable, so they buy them at a premium price. However, companies seeking differentiation should not ignore these costs. This is because the obvious cost inferiority can offset the benefits of differentiation.

companies should consider the degree of product differentiation, market segmentation, and differentiation capabilities. First, companies that pursue a discrimination strategy choose high levels of differentiation. Differentiation can be pursued using various methods, such as product quality, technical features, and services. Companies seeking differentiation attempt to differentiate themselves in as many dimensions as possible, thereby reducing the possibility of copying competitors. Additionally, companies pursuing differentiation strategies segment the market into various niche markets. Thus, it is intended to meet various consumer needs with products designed for each niche market. Finally, companies seeking differentiation should pursue differentiation capabilities for functions that are sources of differentiation. In this regard, R&D (technical capabilities) and marketing functions are important, but manufacturing functions and production management technologies should not be ignored. Because of the cost of differentiation, the cost of companies seeking differentiation is generally higher than that of companies seeking a cost advantage. Therefore, production costs should be controlled such that the product price does not exceed the price the consumer is willing to pay. In other words, companies seeking differentiation should have equal or similar costs to their competitors by reducing costs in all areas that do not affect differentiation. In this sense, even if production costs cannot be minimized, they should have the ability to control production costs to the extent that the source of differentiation is not lost and is maintained.

The third strategy was the focus strategy. The term "focus strategy" refers to the intensive targeting of specific markets, consumer groups, product types, and regions. While the cost advantage and differentiation strategies are for the entire market, the focus strategy focuses only on specific markets. Companies that pursue focus strategies typically choose between cost advantage and differentiation within specialized areas. This is because companies pursuing focus strategies are usually small in size, making it difficult to pursue both cost advantage and differentiation strategies simultaneously. If an entity pursuing a focus strategy chooses one based on a cost advantage, it will try to compete with a cost-leading company in a segmentation market that is not disadvantageous in terms of cost. In other words, companies pursuing focus strategies try to gain an advantage in terms of cost by focusing on complex products or orders that do not show a good experience curve effect. If a company chooses a focus strategy based on differentiation, it can innovate faster than a company that pursues large-scale differentiation by focusing on a small range of products. Depending on the focus strategy for cost advantage and the focus strategy for differentiation, the level of differentiation may be low or high. The focus



Source: Edited by Authors

Figure 4: Generic Competitive Strategy

When implementing differentiation strategies,

strategy targets a specific market rather than the overall market; therefore, the degree of market segmentation is low. Additionally, companies pursuing focus strategies can pursue various differentiation capabilities. This is because this strategy can attempt various cost advantages or differentiation and thus requires various differentiation capabilities.

3. Current Status of Full Service Airlines (FSA) and Low-Cost Carriers (LCC) in Korea

3.1. Domestic FSAs

3.1.1. Korean Air

Korean Air is an air carrier and plays a pivotal role in Hanjin Group. The predecessor of Korean Air was the state-run Korean Air Corporation established by the government under the Ministry of Transportation on June 19, 1962. Since then, Hanjin Corporation, affiliated with Hanjin Group, took over the management rights of Korean Air Corporation and founded Korean Air Co., Ltd., and the official founding date of Korean Air became March 1, 1969. At that time, there were many voices inside Hanjin's trading company opposing the acquisition of public corporations, which were suffering from deficits. However, Hanjin Group founder Cho Joong-hoon took over the Korean Air Corporation at the recommendation of former President Park Chung-hee that "the place where the national flag is flying is where the country's national power extends." The CI of Korean Air, modeled after the Taeguk pattern, was applied from March 1, 1984. The business areas are air transportation, aerospace, in-flight meal business, and in-flight duty-free sales business, and Incheon International Airport Terminal 2 is used as a dedicated terminal, and operates in 123 cities in 43 countries around the world to transport passengers and cargo.

3.1.2. Asiana Airlines

Asiana Airlines is a South Korean private airline affiliated with the Kumho Asiana Group in South Korea. It is Korea's second-largest private airline after Korean Air, with Incheon International Airport and Gimpo International Airport as hub airports. Asiana Airlines is also a member of the Star Alliance Airline Alliance. In 2016, LCC Air Seoul was established to generate profit for the Asiana deficit route. In 2017, Asiana Airlines recorded its highest operating profit in six years, with 273.66 billion won. In 2018, it recorded sales of 6.85 trillion won, an operating profit of 178.4 billion won, and a net profit of -10.4 billion won, breaking its highest quarterly sales for

eight consecutive quarters and its highest annual sales of 6.85 trillion won.

In December 2009, due to the liquidity crisis, it took steps to sell the self-contained agreement procedure with creditors. As the high debt rate continued despite overcoming the crisis, it eventually decided to sell in April 2019. HDC Hyundai Development Company was selected as the preferred bidder in November 2019, and Asiana Airlines decided to sell to HDC Hyundai Development Company on December 27, 2019, but the sale was canceled due to the COVID-19 incident. On November 16, 2020, Korean Air's acquisition plan for Asiana Airlines, led by the Korea Development Bank, was outlined. It plans to maintain the Asiana brand during the next two to three years of mergers and acquisitions and be absorbed by Korean Air.

3.2. Domestic LCCs

3.2.1. Jeju Air

Jeju Air is an LCC jointly established by Jeju Island and the Aekyung Group in January 2005. Based on Jeju Island, it is the third regular airline in Korea. Jeju Air was established to use aircraft at low rates for Jeju residents, who were highly dependent on aviation owing to the local conditions of the island, and to relieve the inconvenience of seat shortages during peak seasons and weekends (Kim, 2014). Jeju Air started its first flight in Korea in June 2006 with a service that applied at a low price and approached customers in a friendly manner. Subsequently, it began international flights in July 2008, and since March 2009, it has become a global airline by launching regular international flights for the first time as a domestic LCC. Jeju Air operates the largest number of international flights among national LCCs by operating 16 regular routes in 16 cities in seven countries, including Japan, Thailand, the Philippines, and Hong Kong.



Source: www.jejuair.net

Figure 5: Aircraft of Jeju Air

3.2.2. Jin Air

Jin Air was established on January 23, 2008, with a

capital of 20 billion won, and it is now an LCC with eight aircraft, starting with the Gimpo/Jeju section of domestic flights on July 17, 2008. A subsidiary of Korean Air, it currently operates regular flights to Bangkok, Guam, Clark, Macau, Hong Kong, and Shanghai, as well as irregular flights to Japan and China. In addition, it was approved by the Seoul Regional Aviation Administration (CAT-III), which is recognized for its ability to safely perform takeoff and landing within a certain standard using aircraft instruments under low visibility conditions (Hong, 2012). For this reason, it can be seen that Jin Air has secured the competitiveness to respond more flexibly to situations such as delay/cancellation/return compared to other LCCs. In addition, the designated seat number introduced a free zone seating system in Korea, which reduced the boarding time. Jin Air is also actively engaged in social contribution activities. One of the most representative activities is to take the lead in social contribution activities by donating profits generated through an eco-friendly campaign called "Save The Air" to the environmental movement fund.



Source: www.jejuair.net

Figure 6: Aircraft of Jin Air

3.2.3. Air Busan

Air Busan was established in 2007 as Busan International Airlines. In February 2008, Busan International Airlines, Busan Metropolitan City, and Asiana Airlines signed an investment agreement, and the name was changed to Air Busan. It is an airline that started its first operation between Busan and Gimpo, with Gimhae Airport as a hub airport on October 27, 2008. Air Busan operates on three domestic routes and 11 international routes. Air Busan has a unique heart greeting method and is the first LCC to provide in-flight newspaper services; and is differentiated and meticulous in its Mamsarang services.



Source: www.airbusan.com

Figure 7: Aircraft of Air Busan

3.2.4. Air Seoul

Air Seoul, the second LCC that Asiana Airlines invested in, is the sixth LCC in South Korea. The airline was established in 2014 to meet the demand for flights from Seoul. Subsequently, it was approved for operation in 2015, and a new regular flight was launched on July 11, 2016, starting with the route from Gimpo to Jeju Island. International routes for the airlines were launched in October 2016. Air Seoul's route boarding rate ranged from 80 to 90 percent. It also conducted "free marketing" for the first time in the aviation industry and introduced unconventional promotions such as the annual flight ticket "Mint Pass" (a promotion that allows you to choose the route you want and travel several times for a certain amount).

In the first quarter of 2019, the airline recorded its highest-ever performance, with sales of 74 billion won and an operating profit of 11 billion won. Sales increased 34.3% year-on-year (55.1 billion won), and the operating profit increased 35.1% year-on-year (2.4 billion won). The operating profit ratio increased from 10.4% to 14.8% during the same period last year (4.4%). Air Seoul's highest-ever performance in the first quarter helped turn into a surplus in the first quarter due to factors that led to improved performance by expanding awareness, streamlining organizational operations, and reducing costs through aggressive popular routes and lowest-priced promotions.



Source: www.flyairseoul.com

Figure 8: Aircraft of Air Seoul

3.2.5. Eastar Jet

Eastar Jet began operations on January 7, 2009, and on February 14, 2009, it launched the Gunsan/Jeju route, greatly contributing to the revitalization of Gunsan Airport. Prior to the IMF financial crisis, Gunsan Airport operated five to seven aircraft daily to transport up to 450,000 passengers annually on three routes: Gunsan/Jeju, Gunsan/Gimpo, and Gunsan/Busan.



Source: www.eastarjet.com

Figure 9: Aircraft of Eastar Jet

However, owing to the withdrawal of Asiana Airlines and the reduction of Korean Air's routes immediately after the financial crisis, some passengers who could not use Gwangju Airport visited to take one flight a day in the afternoon. In addition, it has entered the aviation market through aggressive marketing, such as providing seats at the lowest fare in Korea. However, this low-freight marketing deteriorated Eastar Jet's profit structure, and there was once a situation where tightening operations were required due to this profit structure. Currently, Eastar Jet is developing its LCC market by actively marketing domestic and international flights.

3.2.6. T'way Air

In 2005, Hansung Airlines, Korea's first LCC carrier, was suspended because of economic difficulties, such as high oil prices and exchange rates, while preparing to introduce jets and launch international flights. Subsequently, the company changed its name to T'way Air in September 2010, received a reissue of its flight certificate, and resumed operations. With the introduction of the B737-800 in June 2010, it resumed operations and changed its name to T'way Air; in September of that year, it re-launched the Gimpo-Jeju route and has operated seven B737-800s so far. As of April 2018, T'way had 20 aircraft operating in 40 cities in 10 countries.



Source: www.twayair.com

Figure 10: Aircraft of T'way Air

3.2.7. Fly Gangwon

Yangyang Airport, located in Yeongdong, Gangwon-do, serves as a hub for Fly Gangwon, which has three B737-800 aircraft. Plans to introduce seven A330-200 aircraft and cargo planes by 2027 are also underway. In the face of the COVID-19 epidemic, Fly Gangwon's ability to achieve its sales target of 1 trillion won in 2023 and maintain its air transport business solely with passenger demand in Yeongdong, Gangwon-do, will be a key turning point. The Yangyang-Daegu/Gimpo line was operational from July to September 2020; however, it was temporarily closed from November because of low passenger volumes and the impact of COVID-19. Since July 2021, all routes have been operating again on the Yangyang-Gimpo route; however, as the number of COVID-19 confirmed cases in the Seoul metropolitan area increased, only the Yangyang-Gimpo route was closed again in September. The Yangyang-Gimpo route was re-launched on July 22, 2022. It operates the longest domestic route (Yangyang-Jeju).



Source: www.flygangwon.com

Figure 11: Aircraft of Fly Gangwon

3.2.8. Air Premia

Air Premia is an airline established in 2017 and operates the Incheon International Airport as a hub airport. It aims to be an airline specializing in mid- and long-distance routes. Currently, it officially operates in Singapore, Ho Chi Minh City, Vietnam, and Turkey. It was scheduled to be launched in L.A. on October 29, 2022. Air Premia's main model is the B787-9, which was manufactured in 2020, and it will have a total of five units

this year if four are introduced, including two used aircraft signed with Airgo Capital.

If the U.S. and European routes are launched on B787-9, regardless of whether Korean Air and Asiana Airlines merge, it will be more advantageous than other low-cost airlines that are seeking to expand international mid- to long-distance routes. As of 2022, it operates four times a week on the Incheon-Singapore route, and if it is possible to operate seven times a week while preparing to launch the Incheon-Los Angeles route in October 2022, it will attract attention as the third airline for travelers on the American route.



Source: www.airpremia.com

Figure 12: Aircraft of Air Premia

Aero K is an international airline operating at Cheongju International Airport. It has been 10 years since Hansung Airlines, the predecessor of T'way Airlines, and a Cheongju-based airline suspended their operations. Initially, it signed an investment agreement with Hanwha Techwin, an affiliate of the Hanwha Group. It was launched in May 2017 under the name Aero K. In 2019, the Ministry of Land, Infrastructure, and Transport approved the issuance of air transport licenses, and in March 2021, the Cheongju-Jeju route was launched. However, Aero K is preparing self-rescue measures and attracting investment due to poor boarding rates compared to other airlines and poor profits due to engine failure.



Source: www.aerok.com

Figure 13: Aircraft of Aero K

3.2.9. Aero K

Table 1: Overall Passenger Performance by Airline

(Unit: Seat, No. of Passenger, %)

Category		Supply Seats			International Passenger			Boarding Rate		
		July 2021	July 2022	Rate of Change	July 2021	July 2022	Rate of Change	July 2021	July 2022	Rate of Change
FSA	Korean Air	930,306	1,298,087	39.5	527,467	1,065,745	102.0	56.7	82.1	25.4
	Asiana Airlines	737,066	943,948	28.1	456,903	744,355	62.9	62.0	78.9	16.9
	Subtotal	1,667,372	2,242,035	34.5	984,370	1,810,100	83.9	59.0	80.7	21.7
LCC	Aero K	33,480	33,480	0.0	11,667	32,230	176.2	34.8	96.3	61.4
	Air Busan	486,640	605,104	24.3	352,202	503,903	43.1	72.4	83.3	10.9
	Air Seoul	156,640	176,330	12.6	140,557	158,209	12.6	89.7	89.7	0.0
	Air Premia	-	4,944	net increase	-	3,562	net increase	0.0	72.0	72.0
	Jeju Air	686,826	719,853	4.8	595,522	647,934	8.8	86.7	90.0	3.3
	Jin Air	676,998	765,447	13.1	526,794	628,182	19.2	77.8	82.1	4.3
	T'way Air	543,186	615,261	13.3	472,495	500,867	6.0	87.0	81.4	-5.6
	Fly Gangwon	27,156	54,372	100.2	12,192	34,988	187.0	44.9	64.3	19.5
Domestic Airlines Total		4,278,298	5,216,826	21.9	3,095,799	4,319,975	39.5	72.4	82.8	10.4
Foreign Airlines Total		341,399	907,804	165.9	122,417	694,535	467.4	35.9	76.5	40.6
Total		4,619,697	6,124,630	32.6	3,218,216	5,014,510	55.8	69.7	81.9	12.2

Note 1: Aero K started operating on February 25, 2021 / Air Premia operated from Gimpo to Jeju for approximately three months, from

September 8, 2021, to October 110, 2021.
 Note 2: Eastar Jet excluded due to non-performance

4. Generic Competitive Strategy of Korean FSA and LCC

4.1. Cost Advantage Strategy

LCCs have used a strategy to secure competitiveness by maintaining low prices through breakthrough cost reduction compared to existing FSAs with a relatively simple price structure. While FSA is more competitive than other airlines in differentiating in-flight services, LCC reduces costs by not providing general in-flight services or charging for some services. The elements of the LCC's operating cost reduction and the contents of the service reduction are presented in Figures 15 and 16.

The various cost-reduction methods are as follows: The first is service simplicity. Minimizing free services and workforce is a common principle of LCC. In addition to providing meals on board, drinks, water, and beer are not provided; even if they are provided, passengers have to pay for them. However, in Korea, most basic drinks, such as bottled water or juice, are still provided free of charge. In addition, magazines, newspapers, etc., are not provided onboard, or they are kept as simple as possible.

Second is the Internet's ability to scale. While airlines usually sell tickets through offline channels such as branches or travel agencies, LCC reservations are available through Internet payments or their own reservation centers. This can reduce fees, workforce, and system construction costs.



Source: Edited by Authors
Figure 14: LCC's Operational Cost Reduction Strategy

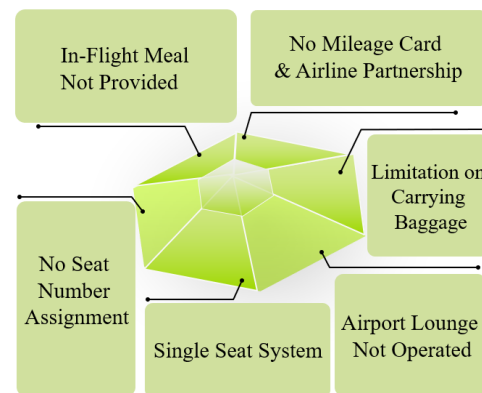
Third, it aims to maximize aircraft utilization. In the case of LCC in the U.S. and Europe, the operating rate is approximately 13 hours on average, and it maximizes profits by turning aircraft as much as possible. Korea's LCC also has a maximum operating rate of approximately 12 hours per aircraft, on average. It is also using a method of expanding routes to Southeast Asia by utilizing the nighttime when domestic flights are not available.

Fourth, there is a method to minimize airport landing fees and fuel costs. LCC uses airports at low costs by using alternative airports to reduce airport usage costs. In addition, efforts such as reducing the weight of onboard luggage and not providing an inflight magazine to reduce the weight of the aircraft have reduced fuel use and carbon dioxide emissions.

Fifth, there is a single-model operation and the outsourcing of maintenance companies. In the case of LCC, it is possible to save labor costs and time by operating a single type of aircraft, purchasing the same parts at a minimum, and allowing technicians to maintain and manage the plane collectively. Unifying airplane models is a preferred strategy for LCC, as it can significantly reduce costs. It also reduces fixed costs, such as inventory costs and maintenance personnel, through outsourcing to maintenance companies.

Sixth, new revenue sources have been created. LCCs are making every effort to reduce costs while at the same time trying to find new revenue sources. For example, in the case of Ryan Air, the use of in-flight toilets is charged, and paid advertisements are introduced for in-flight consumables such as tissues. As such, LCCs are striving to find various revenue sources, and these efforts have maintained low fares to enable sustainable management.

The seventh step is to abolish the designated seat system and the charge for seat designation. By not operating a designated seat system, the seat vacancy rate is minimized, seat designation is allowed, and costs are imposed.



Source: Edited by Authors
Figure 1: LCC's Service Cost Reduction Strategy

Finally, the FSA commissions famous designers to create cabin crew uniforms, but the LCC reduces production costs through small and medium-sized enterprises.

As such, LCC is implementing its management strategy based on the characteristics of point-to-point operations, the introduction of single-model aircraft and local secondary airports, online ticket sales, one-way airfare, the minimization of ground waiting time, high aircraft utilization, single-seat operation, and the simplification of in-flight services.

4.2. Differentiation Strategy

While LCCs have focused on low-fare price policies, the FSA has made great efforts to strengthen the competitiveness of airlines or enhance their image by differentiating in-flight services. Korean Air, Asiana, and the domestic FSAs have likewise adhered to their premiumization strategies. This premium strategy can be found in the premium in-flight services provided in the first class of the FSA.

Korean Air's first class is treated best, even before boarding the plane. When using Incheon Airport, Korean Air First-class passengers can use the lounge and shower services at the Incheon Grand Hyatt Hotel. In the cabin, the in-flight meal and first-class in-flight meal menu consist of dishes using eco-friendly ingredients, and various high-quality wines are also provided. Long-distance travelers are provided with pajamas made by world-class designers to relax and can also use a lounge where they can enjoy cocktails. In addition, convenience products such as hand cream, face cream, and lip balm are also provided.

Asiana Airlines' first class operates a first-class lounge where you can enjoy simple snacks and drinks and use a full-body massage and shower room. The seats are equipped with the world's largest personal monitor (32 inches), allowing viewers to watch movies on a large screen. The in-flight meal is also accompanied by a wine selected for the royal dinner and a sommelier appointed by the royal food researcher. In addition, pajamas and luxury brand cosmetics travel packages are available for first-class passengers to enjoy a comfortable trip.

In this way, Korean Air is developing a high-end strategy that prioritizes customer service by increasing first-class seats and expanding lounges for business and first-class customers. On the other hand, Asiana Airlines said that it would reduce the right to use the lounge for excellent members from July this year, and its seats contrasted with those of Korean Air by increasing economy premium seats rather than premium seats. These two airlines have had two main reasons for emphasizing premiumization in recent years.

First, it is because of competition with LCC. Since LCC first entered the market, it has continued to expand its share of short-haul routes, especially in 2014, with LCC's share of domestic transportation exceeding 50%. In the third

quarter of the previous year, there was steep growth. This situation is similar on international flights. LCCs account for approximately 30% of international transportation. Short flights, such as those to Japan and Southeast Asia, have been accused by the FSC of trespassing on market share. This situation is expected to worsen in the future. Although the FSA must prepare crews and corresponding services for various aircraft models, the LCC can be adjusted more flexibly because it provides minimal service for a single aircraft model, which leads to the LCC's price competitiveness. FSA's customers pay more expensive airfare because they place more weight on the value of the service than on the value of the money they are trying to pay, but customers leave the LCC because it is not easy to differentiate the service on short flights.

The second reason FSA emphasizes premiumization is because of its brand image. The FSA can only conduct business with strict and special state approval. Only the FSA can fly long-distance routes to the United States (except Guam and Hawaii) because Korea has granted permission to only two domestic airlines, including the LCC. Currently, Korean Air and Asiana Airlines' strategic routes are through the Americas. However, if there is no clear difference between airlines with premium images and those without, the competitiveness of premium airlines will disappear under the same service conditions as in the United States. For this reason, it is difficult for Asiana Airlines to drastically reduce existing services, such as lounges, to maintain its high-end image despite adversely affecting its profits (Sung, 2019).

4.3. Focus Strategy

The domestic aviation industry faces a structural problem securing profitability due to high-cost structures, such as low boarding rates, high oil prices, and labor costs. Existing FSA were focused on international flights that were more profitable than domestic flights, and this management strategy deteriorated the profit structure owing to the rapid increase in fuel costs caused by the prolonged high oil price phenomenon in the 2000s. Its ripple effect has continued to increase fares and has eliminated and reduced routes, affecting consumers using aviation services. Consequently, interest in the operation of airlines based on a low-cost structure that can minimize the impact of external environmental factors have begun to increase in the domestic aviation industry. These low-cost airlines have provided high-frequency and low-freight services using small aircraft on low-demand routes with short distances, not routes mainly targeted by large airlines. In other words, the LCC developed and explored new niche markets by avoiding direct competition with the existing FSA and targeting routes that were not in demand or less

competitive than competing in the existing air transportation market.

As a result, early domestic LCCs focused on short-distance routes like domestic flights, whereas FSA focused on long-distance routes on various routes. However, in recent years, domestic LCCs have gradually expanded to medium- and short-distance routes, such as international routes, including China, Japan, and Southeast Asia, as well as domestic routes. Among domestic LCCs, Jeju Air is the first to take the lead in expanding mid- to long-distance routes, which are expected to start operating between Busan and Singapore (Changi) as early as July. Air Busan, the only LCC in Korea that does not operate flights from Incheon, won transportation rights in the distribution of routes between Korea and China and began operating routes between Korea and China in October 2019. LCCs, which have been taking strategies to focus on short-distance routes, are now turning to expanding mid- and long-distance routes as well as short-distance routes to survive infinite competition because of the saturation of existing routes in Japan, China, and Southeast Asia. LCC is preparing survival strategies by strengthening competitiveness through differentiation, such as actively discovering small cities at home and abroad and expanding medium- and long-distance routes.

5. Conclusions

Today, the aviation industry has developed rapidly as the number of aircraft passengers has expanded and the standard of living has improved. Competition between FSA and LCC began in Korea after low-cost airlines emerged in 2005, advocating “low fares” and “popularization of air travel.” FSA, which was expected to inevitably compete to attract passengers due to the entry of LCC, succeeded in operating by establishing a subsidiary of LCC and investing in high-tech facilities differentiated from those of LCC (Lee et al., 2013). The emergence of LCCs in this rapidly changing aviation market has intensified the competition among airlines.

In recent years, LCC sales have been steadily increasing, and Jeju Air recorded 90 million cumulative passengers on domestic and international flights for the first time among LCCs until July 2022. In addition, Jeju Air and Jin Air exceeded 1 trillion won in sales in 2019. T'way Airlines and Air Busan posted sales of 600 billion won to 800 billion won, and the LCC share of all domestic passengers rose nearly 59% last year, showing rapid growth.

This study analyzed the current status of domestic FSAs and LCCs in the domestic aviation market, where overheated competition is intensifying. It analyzed the

competitive strategies of domestic airlines through Michael Potter's competitive strategy framework. The main analysis results are as follows: First, LCCs focus on cost-advantage strategies that reduce costs, but FSA also holds special pricing events comparable to those of LCCs, and some routes use operating strategies that are not much different from those of LCCs. Second, unlike LCC, FSA attempted to build an image of airlines through a luxury service strategy, but they benchmarked each other's counterpart strategies to expand profitability. For example, Korean Air and Asiana Airlines are expanding their additional income by reducing or eliminating their first-class seats. However, the boundaries between FSA and LCC in the domestic aviation industry disappeared, with LCC operating a dedicated lounge and introducing a new seating system. Third, in the early days, LCCs targeted short-distance routes such as domestic flights, but in recent years, competition for long-distance routes with FSA has become inevitable.

In the domestic air transport industry, there are many constraints compared to the United States and Europe, where LCC is activated in a cost-advantage strategy that reduces costs, which is the biggest advantage of LCC. For various reasons, such as the absence of secondary airports and the incomplete liberalization of the transportation market, it is somewhat unreasonable to implement an ultralow fare strategy, as in the case of foreign airlines. For domestic LCCs to survive in the aviation market, they must secure profit routes and low-cost structures, promote the construction of LCC terminals, and secure specialized differentiation strategies to expand profitability.

The limitations of this study are as follows: First, it focuses on domestic airlines. Future studies can derive more implications from the comparative analysis between foreign and domestic airlines. Second, this study was conducted through case analysis; however, in the future, more detailed research results should be derived through empirical analysis.

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