Air transportation market and airports stepping into a time of change

SATO Seiji
Airport Department Manager

Key words: LCC, Open Sky, policy simulation, revitalization of regional economies, stock management

1. Entry of LCC and "Open Sky" Airline Deregulation Policy

In 2012, three Japanese Low Cost Carriers (LCC) started operation, and they will compete fiercely with each other. Peach Aviation, in which All Nippon Airways jointly invested, started Kansai International Airport based flights to Sapporo/Fukuoka in March, and other flights are to follow from the same airport to Nagasaki, Kagoshima, and Incheon, Korea. Jetstar Japan, in which Japan Airlines jointly invested, will begin by basing its operation at Narita Airport and in July, start flights to Kansai International Airport, Fukuoka, Sapporo and Naha. Air Asia Japan, a consolidated subsidiary company of All Nippon Airways, will be based at Narita International Airport and fly to Sapporo, Fukuoka and Naha beginning in August and fly to Incheon and Busan in Korea from October. It is estimated that the competition among these Japanese owned low cost carriers will become fiercer as the introduction of more aircraft expands their flight networks in the future. On the other hand, there are already nine low cost carriers regularly flying from countries including Korea, Singapore, Malaysia, the Philippines and Australia.

A Low Cost Carrier (LCC) is a budget carrier which pursues a business model of lean and efficient operation, permitting the carrier to cut operational costs remarkably in comparison to major airlines and successfully offer basic services to customers at extraordinary prices. The key to low cost operation is a high operation rate of aircraft, personnel and facilities. The budget carriers have diversified efforts from company to company so as not to leave aircraft, personnel and facilities idle by getting rid of any waste by ways such as reducing the time to stop at one airport, avoiding busy airports, concentrating on shorter distance flights, swing use of facilities, offering minimal free-of-charge services, having employees hold two and more work positions etc. The LCC are very aggressively developing businesses in markets including Europe and America as well as South East Asia, and it is assumed that the LCC share of the whole air transportation market has already reached the 20-30% level.

Looking at our air transportation market, the "open sky" deregulation in the airline business has been surging and developing very quickly. Airports in the Metropolitan Area, which were excluded from airline deregulation, are now included, and the fifth freedom (beyond rights) has been granted. By January, 2012, Japan had already concluded airline deregulation with twelve countries and regions centered in the US and Asia; and Japan will continue negotiating with China and European countries. One aspect of the background to such rapid development of airline deregulation is the easing of restrictions on airports. The easing of airport restrictions including expanded international flights in airports of the Metropolitan Area has been enabled by an agreement on the increase of annual arrivals/departures at Narita Airport to 300,000 and through an increase of international arrivals/departures at Haneda Airport enabled through the use of runway

D. Concerning airports in the Metropolitan Area, the allocation of airline routes and further expansion are the next tasks to tackle, and coping with busy airports like Fukuoka or Naha is another task that needs to be approached.

2. Focus and purpose of airline policies

As mentioned above, the airline industry is in the middle of major changes and the focus of our government policies for airlines and airports will be integrated promotion of the following: Airline Deregulation which will deregulate international flight routes and the number of such flights, the promotion of new business entries by new airlines including LCC with specialized operation styles, and strategic airport operation such as flexible and dynamic setting of landing fees. The effects we target to achieve those policies are: the revitalization of regional economies by the increase of incoming tourists, which will be generated by creating new airline routes or increasing flights of regular international flights and international chartered flights, the enhancement of airport functions to respond to needs of extraordinary business operation like LCCs to achieve efficient flight and operation, and the improvement of customers' convenience by realizing budget fare service, as well as the recovering and further development of the network of flights formerly downsized.

It is the role of the Airport Department to support those policies from the technical side. Concerning challenges including how we can effectively use existing airports or how we can efficiently manage or maintain current facilities, our study theme will be the development of methods which will be used by airports across the board: to develop planning methods, policy simulations methods from the perspective of how the airport should be utilized in supporting improvement of customers' convenience and revitalization of the regional economy, to establish verification methods for performance design, and to develop methods for strategic maintenance and management on the premise of securing safety. It is also essential to consider risk management methods in preparation for future natural disasters by taking advantage of lessons learned from Great East Japan Earthquake. The following are specific research topics.

3. For the improvement of customers' convenience and revitalization of regional economies

We promote the development of methods for policies for simulations and the improvement of their accuracy. First of all, we work on further improving forecast accuracy for air transportation demand on the basis of the current air transportation demand forecast model. Further, we construct policy simulation models to evaluate impacts or effects of air policies on the air transportation market in the face of a growing need to create policies concerning how airports should share roles in areas where multiple airports are constructed and how the capacity should be managed at busy airports.

We study the expansion of the airline network, possibilities of establishing new airline routes to respond to the change of the air transportation market and necessary policies to satisfy them in response to the trend towards high-frequency, small-scale aircraft in domestic air transportation and the full-fledged entry of LCC in the market.

We think that forwarders which act as a bridge between the shippers and airlines are playing an important role as one important party involved in the airport choice mechanism in the air cargo market, and we study policies to improve competitiveness while considering the airport choice mechanism in which forwarders seem to play an important role.

We consider how airports should be utilized effectively; through methods to evaluate the role of an

airport in its region's economy correctly based on the theory of economics, and how local airports should play a role in supporting regional revitalization and the promotion of tourism.

The environment surrounding airport operation has been drastically changing, including elements such as a decrease in population, downsizing of equipment, development of LCC, airport budget changes, and we consider ways how airports can be operated efficiently.

4. For safe, secure and efficient management of facilities

We study the advancement of technical standards related to airport base facilities. First, we expedite the establishment of verification methods to respond to performance standardization of facility design.

For example, through enabling performance verification of asphalt materials quantitatively based on dynamic and chemical indices, we improve the accuracy of lifecycle costs calculations; further, we establish reasonable design methods adapted to people living longer, realize simplified maintenance and management and enhance strategic maintenance and management.

Further, we develop surface design methods concerning runway safety performance by reflecting characteristics of paving materials and establish lifecycle costs calculation methods so that we can construct reasonable stock management methods for airport base facilities.

We consider a draft for the revision of the calculation standards for airport civil engineering works and an improvement of the calculation system for airport civil engineering works, and consider a draft of construction management standards including common specifications for airport construction and common specifications for investigation.

We work on the advancement and efficiency of the maintenance and management of airport facilities. To maintain safety and punctuality of aircraft, it is necessary to inspect and check the pavement condition of airport runways and to maintain/manage them properly; and such inspections usually need to be executed during short periods at night when the runway is closed. We research and study the establishment of efficient methods for maintenance and management including development of support tools for regular patrols and inspections, and the construction of a system to share technical information through all stages of investigation, planning, construction, maintenance/ management. We further conduct research regarding predictions of deterioration for preventive maintenance.

We perform research on how to be prepared to ensure that an airport performs its role at the time of a disaster. In our study, we will pay attention to the roles of airports changing over time, as well as risk elements, vulnerabilities, facility recoverability, and methods to achieve earlier availability of each airport.

We research the risk management of airports. Based on certain hypothetical situations, our study will pay attention to the assessment axes of results seriousness, frequency of occurrence and vulnerabilities, and to an overall evaluation of countermeasures.

[Reference]

1) Futoshi Osada, "Koku Gyosei no Genjo to Tenbo ni Tsuite [Current status and perspectives of airline administration]," Aviation Policy Research Association, Jan. 19, 2012