A Case of Utilizing Results

Support of Aviation Policy Formulation by the Enhancement of the Aviation Demand Forecasting Method

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1.Introduction

In Order to provide a basis for a technical review aimed at further enhancement of the capability of airports in the Tokyo metropolitan area, the Civil Aviation Bureau announced demand predictions at a Transportation Policy Council meeting on September 26, 2013. The predictive model was developed and improved by the NILIM Airport Planning Division. In addition, we gave technical advice to the Ministry regarding the application of the model.

This paper summarizes the predictions including a summary of the results and future prospects for the research design.

2.Summary of the Predictions
(1)Summary of the Results

Predictions were made for FY2017, FY2022, FY2026 and FY2032. The predictive model was developed based on the *Four Step Model* which is often applied to various kinds of transportation project planning. Since the prediction results are significantly affected by the GDP, we made predictions for the following three cases: Low-growth/Middle-growth/High-growth. The Middle Growth scenario is based on the Japan Revitalization Strategy formulated by the Cabinet on June 14th, 2013.

It is predicted that total aviation demand for airports in the Tokyo metropolitan area will be 110-130 million in passenger traffic and we will need 690-760 thousand landing/departure slots in FY 2022(Middle-growth Case). We also predict that such aviation demand will exceed capacity of the airports in the same year.

(2)Improvement of the Predictive Model

The impact of low-cost-carrier(LCC) entry into the domestic/international aviation markets is taken into consideration by the scenario in which the increase in the share of LCCs will cause a decrease in flight fares and an increase in passengers. Furthermore, the effect of Tourism Policy including the visa-waiver-program for tourists and so on is also taken into account.

3.Future Prospects of the Research Design
(1)Domestic Aviation Demand Forecasting

Using a stated-choice survey, we are examining air transport demand changes when low cost carriers(LCCs) enter domestic aviation services between Tokyo Int'l Airport and Kansai Int'l Airport and the Linear Chuo Shinkansen(high-speed railway) begins operation. In order to conduct the examination, we are collecting data from the stated-choice survey and developing a prototype for the mode choice model which could treat LCCs as an independent transport mode.

(2)International Aviation Demand Forecasting

Now we are conducting a detailed analysis of the LCCs entry/withdrawal into/from international flights in the Asian civil aviation market. Such research findings will be incorporated into the current international aviation demand forecasting model.

[Sources]
Transportation Policy Council on September 26, 2013
http://www.mlit.go.jp/common/001018977.pdf

Figure. Prediction of Aviation Demand in the Tokyo metropolitan area

Predicted Number of Landings/Depatures(Domestic+International)
(Thousands/year)