

Research Trends and Results

Research on the possibility of new domestic airline route by downsizing of aircraft and LCC.

HATANO Takumi, International Maritime Policy Analyst

Airport Research Department

(Keywords Domestic airline, cost analysis, LCC, Small aircraft)

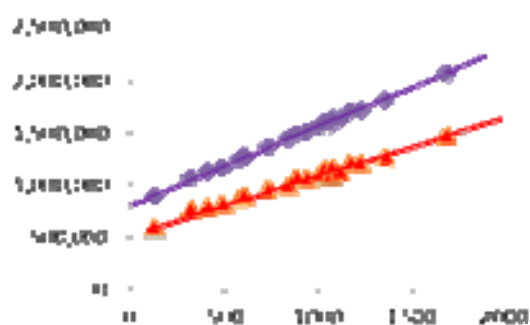
1. The purpose and overview of this study

In our domestic air transport, our aircraft was bigger compare to Europe and America, but lately air carriers have phased in so-called regional jets which have less than a hundred passengers. Meanwhile, new air carriers so-called low cost carriers (LCC) that feature low-cost have been expanding their business in Southeast Asia. In 2012, three companies that are full-scale LCC have successively started service in Japan.

Based on the situation surrounding air transport, this is a consideration regarding the formation possibility of new airline routes by downsizing aircrafts and price reduction.

2. Cost analysis of domestic air carrier

Regarding domestic air carrier cost, we calculated the cost per flight for flight distance for one model of aircraft, and it's based on the information of an air carrier that publishes a full detail of the cost as IR. Also, we ran the numbers on the cost level of using small aircraft from the comparison of a unit cost per seat and km and indicated the results in chart 1.



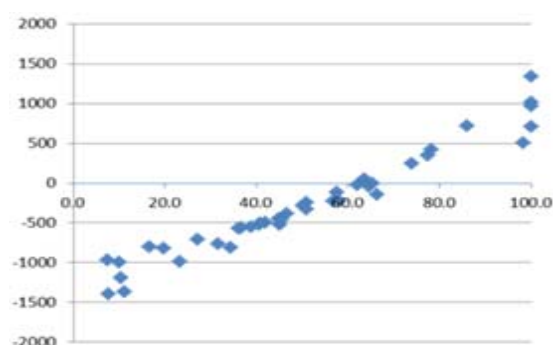
Draw1 Estimated cost (Yen) by flight distance (Km)

3. Demand analysis and consideration of new airline formation possibility

For demand analysis that is preconditioned for the airline formation possibility, a demand forecasting model that was developed by The National Institute for Land and Infrastructure Management (NILIM) was used. For basic data, such as economy, an index of 2011 was used. About 45 routes that are subject for this, the numbers are run for two flights per a day that is the most convenient times as an ideal condition.

Regarding airfare level, it is just about the present

level for small craft, and it was calculated as 70% of the present for LCC. Load factor (LF) and assumed freight revenues are estimated for the assumed demand. The results are indicated in chart 2. Based on the results, routes that have airline formation possibilities are indicated in chart 1.



Draw 2 LF and balance of payments (for small aircraft)

Chart 1 Routes that have airline route formation possibilities.

Airlines that are considered as airline formation possibility by using small aircrafts		Airlines that are considered as airline formation possibility by LCC
Matsumito-Naha	Chitose-Miyazaki	Sendai-Tokushima
Kansai-Obihiro	Sendai-Tokushima	Kansai-Obihiro
Sendai-Asahikawa	Chubu-Kushiro	Chubu-Kushiro
Narita-Hanamaki	Niigata-Okayama	Sendai-Asahikawa
Narita-Niigata	Kitakyushu-Sendai	Narita-Kagoshima
Narita-Miyazaki	Sendai-Matsumoto	Narita-Hanamaki
	Narita-Kagoshima	

4. Challenges for the future

Change of a situation around airline industry is so fast. The three full-scale LCC companies actually present lower rates than this supposition. Each LCC plans to expand its aircrafts, so follow-up for the situation will be needed in the future.

【Reference】

- 1) TECHNICAL NOTE of NILIM No.698 <http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn0698>.

Airlines that are considered as airline formation possibility by using small aircraft

Airlines that are considered as airline formation possibility by LCC