

Forecasting in a Multiple Airport Environment

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INTRODUCTION

- Airport Master Plan Perspective
- Key Forecast Factors
- Importance in Accounting for Other Airports
- Case Studies
 - Large Airports Washington/Baltimore Area
 - Small Airports Northwest Florida
- Conclusions and Cautions



AIRPORT MASTER PLAN PERSPECTIVE

- Moderate Forecast Budget
- Quick Turnaround Requirement
- Sophisticated Demand Allocation Models Usually Not an Option
- Other Nearby Commercial Airports (within 2 hour drive) have an Impact on Demand and Their Impacts Still Need to be Addressed



KEY FACTORS IN AIRPORT DEMAND FORECASTING

- Size of Market (Income, Employment)
- Cost of Service (Fares, Yields)
- Cost of Substitutes (Fares & Yields at Competing Airports)
- Identifying True Relationship between Each Factor and Passenger Demand



ELASTICITY

Percentage change in demand (passengers) in response to a 1.0 percent change in a given independent variable (income, fares, etc.) assuming all other variables are held constant.



LOCATION MAP Washington/Baltimore Metropolitan Area



Forecasting in a Multiple Airport Environment

DOMESTIC PASSENGER ORIGINATIONS IAD/DCA, and BWI



Forecasting in a Multiple Airport Environment

DOMESTIC ORIGINATIONS AND FARES IAD/DCA, and BWI



Forecasting in a Multiple Airport Environment

WASHINGTON MARKET ELASTICITIES WITH & WITHOUT BWI IN EQUATION

W/O BWI

W/ BWI

Income Elasticity	0.849	1.139
Fare Elasticity	-0.401	-0.638
BWI Yield Elasticity	N/A	0.432
R-Squared	0.936	0.984



PROJECTED DOMESTIC ORIGINATIONS IAD and DCA



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LOCATION MAP PANAMA CITY (PFN), FT. WALTON BEACH (VPS), PENSACOLA(PNS), TALLAHASSEE(TLH)



DOMESTIC PASSENGER ORIGINATIONS PFN, VPS, PNS, & TLH



Forecasting in a Multiple Airport Environment

PANAMA CITY MARKET ELASTICITIES WITH & WITHOUT OTHER AIRPORTS IN EQUATION

	Without	With
Income Elasticity	0.253	1.244
PFN Fare Elasticity	-1.781	-2.254
VPS Fare Elasticity	N/A	1.164
PNS Fare Elasticity	N/A	0.596
TLH Fare Elasticity	N/A	N/A
R-Squared	0.862	0.949



PROJECTED DOMESTIC ORIGINATIONS PFN w/ & w/o Adjustment for Other airports



Forecasting in a Multiple Airport Environment

CONCLUSIONS

- Competing airports affect passenger activity.
- Effects of competing airports can often be measured.
- Failure to account for these effects can distort demand relationships both fares and income.
- Failure to account for competing airports can significantly alter forecast even if input variables (income and fare forecasts) are the same.
- Tool for scenarios.

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CAUTIONS

• Effects of competing airports cannot always be measured.

- Fare histories may be too similar

• Approach will not work well if one of the airports experiences a major change in role.

