عنوان مقاله:

Capacity Planning Based on Scenario Tree and Passenger Motion Equation (IKIA and MIA)

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خلاصه مقاله:

Demand for air travel has increased in quantity and quality, like preflightservices and communications systems, necessitating moreserious attention to air terminal capacity planning. Capacityplanning, especially when uncertainty exists about future levels ofpassenger demand is also considered, becomes even more complex.The problem of random, multistage and nonlinear modeling mustbe adapted to include a multi-commodity network flow structurewhich shows the flow of passengers at terminals. In this paper acapacity planning approach is utilized based on the concepts ofscenario tree and motion equations of passengers, and implementedfor passenger terminals of the two major International Airports(IKIA & MIA) in Tehran, Iran. Results of mathematicalprogramming model for these case studies indicate that increasingthe capacity of the passenger terminal in IKIA can increase theproductivity of the existing space and the whole airport which isalso very economical. At MIA, it would be necessary to increasethe effective width of corridors and to increase number ofprocessing stations.

کلمات کلیدی:

airport passenger terminal, capacity planning, Multistage Stochastic Programming, Imam Khomeini InternationalAirport, Mehrabad International Airport

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