

## Analytical models and production planning trip air transportation in the country Case study; of Isfahan Beheshti International Airport

I. Ebrahimzadeh. M. Saghaei. E. Izadfar. N. Izadfar

Received: 10 March 2010 / Accepted: 3 December 2010, 21-24 P

### Extended abstract

#### 1- Introduction

Provides airport, were. Because of the nature and frequency of flights of aircraft at the time and lack of continuity, noise pollution will not cause problems for society. In addition, low population density in the vicinity of airports and air traffic light, the occurrence of an accident would prevent dangerous for urban communities. The extraordinary growth of air traffic has increased the likelihood of negative reactions. But the spread and evolution of the aircraft, the most profound effect on the relationship between urban communities and the airport is laid. Increasing the size and speed of the aircraft equipment required to increase their landings and changes in construction and combination bands in

the airport is functional. It also increases the power output of aircraft engines cause noise pollution is inevitably the case (Safarzadeh and Mahmoud, 1383: 84-82).

#### 2- Theoretical Bases

Theoretical and research literature Focuses on developed countries. However, research on Transport and air travel is done mainly in these countries.

Extensive research in this area and so on airlines and liberalization of air transport in America and Europe in the past two decades has taken place. In particular, air transport and its functions, Gvtz (1992), Graham (1995), have done extensive research. Among the countries in which research Developed by, and Boone Lynbak (1995) about the role The government plays an important airline in the release of nascent non Industry plays in East Asia, have been discussed. Jane and Fnjyvn Analysis are made. Hooper (1998-1997) experiences and perspectives Competition and the de-airlines in India review and Rymr (1999) Spatial structure of air transportation systems in Asia and the Pacific Rim In connection with the

---

#### Authors

**I. Ebrahimzadeh** (✉)

Associate Professor of Geography and Urban Planning, University of Sistan and Baluchestan, Zahedan, Iran  
e-mail: ibrahimzadeh@yahoo.com

**M. Saghaei**

Assistant Professor of Geography and Urban Planning, Payam Noor University, Tehran, Iran

**E. Izadfar**

M.A of Geography and Urban Planning, University of Sistan and Baluchestan, Zahedan, Iran

**N. Izadfar**

M.A of Geography and Urban Planning, University of Shahid Beheshti, Tehran, Iran

long-range systems to consider and ultimately International Pgmh (1999) Historical development of air transport in Nigeria tested and Boone (20,000) to access the world of aviation in a home in Ross South Asia has been investigated. Savings in operating costs to consider. The use of analytical models in planning Aviation and Airport also performed relatively well in the research world Is the Bra (1989) in the company of American Airlines Airline Employment problems is a model for allocating aircraft to routes. His goal set has a different flight path of the linear programming model used in this Has been Mvlrvmstrn (1980) A mathematical program for Airlines have offered Flanyg Taygrlayn. Philip and Garkyaryaz (1981), Avslykan (1979), most research on network design, operating on minimizing the total distance traveled or fuel costs have focus.

### 3- Discussion

Region is a range of 40 to 60 km radius in central Isfahan province; the river goes through the generator and flows from West to East (and home town of Consulting Engineers, 1375: 195). Check the status quo of the region shows that this region has one of the most complex environmental problems. Tehran, Isfahan province, the country's most important industrial poles (consulting engineers and town houses, 1375: 15-16). The airport with the roads and highways of the city has a regular road <http://fa.wikipedia.org>.

Gravity model can be the most popular and most widely used model for the process of making the trip, he said. The distance between cities as the main factor in the production process of air travel stress. the Islamic Republic of Iran ([www.flighstates.com](http://www.flighstates.com)).

The average distance flown between 300 to 400 km and the city of Tehran, Ahvaz and Shiraz is concerned. The average flight time of 66 minutes of the airport to the city of Tehran, garlic, Kish Island, Mahshahr, Ahwaz, Abadan reserved. However, according to statistical data of the airport, the airport's contribution to the expansion of international flights in international traffic. Statistics also show that tourism to attract an effective role in the development of tourism in Iran (Esfahan Airport Management, 1387). The analysis was performed by using the gravity model for the coefficient of multiple determinations ( $R^2$ ),  $R^2 = 0.22$  is. This confirms the impact on air travel at a rate of 22. / 0. In fact, the effective operating distance than other elements (business, industry, tourism, space, ease of travel, etc.) is about. Isfahan are the ends, the number of air passengers to the monthly input and output between 84 to 1380, the production of air travel, using a linear regression model, the following results have been achieved. The origin of the demand for air travel to different cities have Mqsdasfhan. So with the right plan to strengthen these factors can increase the demand for air travel to a place of success achieved.

### 4- Conclusion

78. / 0 in production is to take effect. Air travel has been in production. Abbas, Isfahan, Shiraz, Isfahan, Ahvaz and Abadan ascending and the routes to Isfahan, Isfahan and Zahedan, Bandar Abbas to Isfahan will deteriorate. The flights from Tehran to Isfahan is a variable in the years 1387 - 1385 years of soaring and in 1389 - 1388 will decline.

Suggestions City or school because of economic, industrial and tourism in the

country's top stars and has the elasticity needed in this area.

**Key words:** air transport, analytical models, the production of air travel, the distance factor, Isfahan Airport

### Resources

Administration of Airports, Airports of Performance Report, (2008).

Airport Environmental Handbook, 1988. Order 505, Federal Aviation Administration, Washington, October.

Apoghomeh, osi. (1999). The development of air transportation in Nigeria. *Journal of Transport Geography* 135-46.

Behbahani, Hamid and faith. (1994) free will: plan and the airport, Iran University of Science and Industry.

Behnia, K. (1985) The airports Hha Center, Tehran University Publication.

Bowen, John, and Thomas R. leinbach, (1995). The state and liberalization; the airline industry in the east Asian NIC. *Annals of the Association of American Geographers* 85:468-98.

Bowen, John. (2000). Airline hubs in Southeast Asia; National economic development and nodal accessibility, *Journal of Transport Geography* 25-41.

Bozorgnia, A. and Strong, Hossein Ali. (1999) time series, Payam Noor University Press.

divine; AR: Comparison of power functions and linear regression test Mtghyyrh multiple analysis of variance without interaction, M.Sc. Thesis, Ferdowsi University of Mashhad, Faculty of Sciences, (1997).

Engineering and house City: Isfahan International Airport Master Plan Study, Volume 3, Mehrabad Airport, Tehran, (1996).

Engineering and house City: Isfahan International Airport Master Plan Study, Volume 4, Mehrabad Airport, Tehran, (1996).

Fengjun Jin, and fahui wang, and yu liu, (2004). *Geographic Patterns of Air Passenger Transport in china 1980-1998; Imprints of Economic Growth, Regional inequality, and Network Development.* Pages 471-487.

Goetz, Andrew and Christopher J.Sutton. (1997). The geography of deregulation in the U. S. airline industry. *Annals of the Association of American Geographers* 87:238-63.

Goetz, Andrew. (2002). Deregulation, competition and antitrust implication in the us. *Airline industry. Journal of Transport Geography* 10:1-19.

Graham, Brian. (1995). *Geography and air transport.* Chichester; John wiley and sons.2000. *International air transport.* In modern transport geography, 311-36.

Hooper, Paul. (1997), *Liberalizing airline competition in India.* *Journal of Air Transport management* 115-23.

Izadfar, Elham: *Analysis of the location of airports based on standard indicators (sample: martyr Beheshti Airport Isfahan), geography, urban planning master's thesis, University of Sistan and Baluchistan,* (2009).

Larry Merchant: Abdul Reza, the basic concepts of statistics and probability, Tehran, Yyzh Publications, 1384.

Mahdavi, M. and Taherkhani, Mehdi: *The use of statistics in geography,* published Qvms, (2004).

Mahmoud Ali: *Transport Geography,* Tehran University Publication Center, 1362.

Momeni, M.: *A model for the Air Route optimization based on multiple criteria,* dissertation, Tehran University, (1996).

National plan of Integrated Airport Systems (NPIAS), 1990-1999, Federal Aviation Administration, Department of Transportation, Washington, 1991.

- O'Conner, Kevin, (1995), Airport development in Southeast Asia. *Journal of Transport Geography* 79-97.
- Rammer, peter J. (1999), The Asia-Pacific Rim's transport and tele communications systems; spatial structure and corporate control since the mid. (1980), *Geojournal* 48:43 -65.
- Safarzadeh, Mahmoud and innocent, GH: The first airport planning and design, printing and publication of the Center and Research Institute of Management and Planning Organization, (2004).
- Saghaei, M.: Air transport base 100 of Foucault and its impact on the city of Isfahan, Isfahan University Research Week Proceedings, (2003).
- Tavallaie Simin: Introduction to Fundamentals of Economic Geography (industry, transport, energy), Tehran, Jihad Training University Press, (1996).
- [www.fa.wikipedia.org](http://www.fa.wikipedia.org).
- [www.flighstates.com](http://www.flighstates.com).