

Gedaliah Dreyfuss

Undergraduate Thesis

Department of Geography, Honors Program

Research Question

Part I

To what extent are cities linked based on the availability of non-stop flight connections between them?

Part II

What is the impact, economic and otherwise, of non-stop connections on cities?

Abstract






What the railroad did in the 19th century to connect cities across the US and the world, the automobile did in the 20th century, the airplane will do in the 21st century (Kasarda, 2012; Florida, 2012). Airports will continue to grow as the city's gateway to the world and, as they grow, expand routes, and increase passenger flows, will have both an impact on how distance is perceived between places and on the economies and communities present in the origin and destination cities (Neal, 2010). More broadly there has been significant research into the economic impact of airport operations and economic growth (FAA, 2016; Brueckner, 2003). However there has been scant research into newer, direct routes offered from areas previously/currently served by larger hub-and-spoke models

The paper ultimately seeks to create a model to estimate the *relative* connectivity between cities based on their direct-route connections as well as explore the impact of these routes, especially towards smaller, regional, "spoke" markets.

Data this paper will explore include coupon datasets from the FAA (including all origin and destination flights in the US), demographic data from the USDA Economic Research Service, the US Census, as well as other sources of economic indicators.

Proposed timeline

Stats: Weeks total: ~14
Check ins: 4

1st week December		Thesis confirmed
		Initial refining, lit review, data collection (accumulation)
<i>2nd week January</i>		<i>Semester start</i>
4th week January		Check in on direction and progress
		Develop research methods, hypotheses
2nd week February		Check in on research methods, hypothesis, determine statistical approach
		Conduct statistical tests and procedures on data; conduct expert interviews
1st week March		Check in on results of tests, methods
		Draft paper submitted for initial review; comments received, edits made
3rd week March		Check in on edited draft paper
Mid-April		Final paper submitted for review (by advisor + 1 professor)
<i>End of April</i>		<i>Semester ends</i>
<i>1st week May</i>		<i>Grades due</i>

Literature:

Highlights

Link / Source

Alaska sees uptick in economic activity when season of tourists from international destinations (up to 2/3 of int'l tourists from one carrier) arrive.

<http://www.akbizmag.com/Alaska-Business-Monthly/june-2016/Seasonal-Airlines-Boost-Visitors/>

Impact broadly of civil aviation in the US: "The number of people employed in the industry that provide civil-aviation services, manufacture aircraft and aircraft engines, or work in other industries that are indirectly affected by activity in the civil air transportation sector." FAA

https://www.faa.gov/air_traffic/publications/media/2016-economic-impact-report_FINAL.pdf

Airports shape business location and urban development in the 21st century as much as highways did in the 20th century, railroads in the 19th and seaports in the 18th.

<https://www.citylab.com/transportation/2012/04/north-americas-most-important-airports/853/>

In today's knowledge economy, far and away, the most precious cargo they move is people.

<https://www.citylab.com/transportation/2012/05/airports-and-wealth-cities/855/>

News article claiming "More direct flights would boost economy"

<http://www.journalgazette.net/20170406/more-direct-flights-would-boost-economy>

Long-Range Growth: Economic Development in the Global Network of Air Links explores global linkages, multivariate analysis based on mileage, pilot max-fly time radii

<https://www.nber.org/papers/w22653>

Richard Florida-- urbanist-- expanding on the research above: "How Direct Flights Shape a City's Fortunes"; very broad

<https://www.citylab.com/equity/2017/10/how-direct-flights-shape-a-citys-fortunes/544478/>

How flight alliances alter prices, impact airport operations

<https://www.journals.uchicago.edu/doi/abs/10.1086/386274>

Exploration of policy implication of hubbed operations

[https://ascelibrary.org/doi/abs/10.1061/\(ASCE\)0733-947X\(1995\)121:2\(124\)](https://ascelibrary.org/doi/abs/10.1061/(ASCE)0733-947X(1995)121:2(124))

Database of non-stop connections, other passenger data info

https://www.transtats.bts.gov/Databases.asp?Mode_ID=1&Mode_Desc=Aviation&Subject_ID2=0

More flight connectivity → greater economic growth (10:1 ratio); focus on airport expansions in general, not specific non-stop flight connections

<https://journals.sagepub.com/doi/abs/10.1080/0042098032000094388>

Importance of airports in urban hierarchy

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1540-6040.2010.01340.x>

Airports as central to connecting cities like railroads/ automobiles

<https://www.amazon.com/Aerotropolis-Way-Well-Live-Next/dp/0374533512>