



Case Study 3: The Global Perspective



Origins & Destinations





All_Long_Destination

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Long Distance Trips to US Destinations



- Combined business and pleasure
- Entertainment (theater, concert, sports event, gambling, etc.)

Ω

Outdoor recreation (sports, fishing, hunting, camping, boating, etc.)

250 500

- Vacation/sightseeing
- Visit friends/family/relatives

1,000 1,500

2,000 Kilometers Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community Esri, HERE, MapmyIndia, © OpenStreetMap contributors, and the GIS user community₃

Long Distance Trips to Global Destinations



1,2502,500

0

5,000

7,500

Service Layer Credits: Esri, HERE, DeLorme,

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and the GIS user community

- Combined business and pleasure
- Entertainment (theater, concert, sports event, gambling, etc.)
- Outdoor recreation (sports, fishing, hunting, camping, boating, etc.)
 - 0 250500 1,000 1,500 2,000 Latives Kilometers
- Visit friends/family/relatives

Vacation/sightseeing

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☐ Kilometers

10.000



Foursquare is a local search-and-discovery service mobile app which provides search results for its users.

<u>Users</u>: 45 million <u>Launched</u>: March 11, 2009 <u>Slogan(s)</u>: Foursquare helps you find places you'll love, anywhere in the world <u>Founders</u>: <u>Dennis Crowley</u>, <u>Naveen Selvadurai</u>



Regression of miles traveled by air								
	Two-Tailed							
Variable	Estimate	S.E.	p-value					
Any Trips in Tour with Purpose Business		0.04.0						
(meeting/convention/seminar)	0.267	0.016	0.000					
Any Trips in Tour with Purpose								
Vacation/sightseeing	0.073	0.016	0.000					
Destination in California	-0.857	0.016	0.000					
Household Size	-0.018	0.006	0.003					
Vehicles in Household	-0.032	0.008	0.000					
Household is Hispanic	-0.049	0.020	0.017					
Household Block Group Category	-0.078	0.006	0.000					
Household Annual Income	0.052	0.003	0.000					
Foursquare: Convex Hull Area of 50 nearest								
POIs (log km2)	-0.025	0.004	0.000					
Foursquare: Median Number of Ratings at								
50 POIs Around Destination	0.014	0.003	0.000					
Intercept	0.240	0.075	0.001					

Regression of miles traveled driving								
	Two-Tailed							
Variable	Estimate	S.E.	p-value					
Any Trips in Tour with Purpose Business								
(meeting/convention/seminar)	-0.010	0.001	0.000					
Any Trips in Tour with Purpose								
Vacation/sightseeing	0.010	0.001	0.000					
Destination in California	-0.008	0.001	0.000					
Season of Tour	0.002	0.001	0.000					
Household Size	-0.001	0.000	0.033					
Number Employed in Household	0.001	0.001	0.024					
Household Trips in Daily Diary	0.000	0.000	0.000					
Vehicles in Household	0.004	0.001	0.000					
Household Home Type	-0.001	0.000	0.005					
Household Block Group Category	0.003	0.000	0.000					
Household Annual Income	-0.001	0.000	0.033					
Foursquare: Convex Hull Area of 50								
nearest POIs (log km2)	0.001	0.000	0.007					
Foursquare: Median Users at 50 POIs								
Around Destination	-0.023	0.008	0.004					
Foursquare: Median Number of Ratings								
at 50 POIs Around Destination	0.000	0.000	0.063					
Intercept	0.003	0.006	0.682					

GLOBAL AWARENESS & TRAVEL (SU HAN'S DISSERTATION)

Findings

51,019,087 tweets created by **1,764,293** users in the U.S. from Nov 16, 2015 to January 17, 2016

	Туре		Los		
		New York	Angeles	Chicago	Houston
Interaction in					
Cyhersnace	(A) followers	3,553,117	2,495,200	1,242,971	753,331
Cyberspace					
	(B) followings	4,579,117	3,041,503	1,716,828	992,013
	(C) friends	1,967,079	1,353,810	760,104	494,379
	(D) awareness	158,239	27,708	71,391	61,848
Interaction in Real	(E) travel frequency of				
Snace	residents	24,912	18,100	9,837	1,933
Space	(F) travel frequency of				
	visitor	41,669	39,027	21,961	12,324
N/A	(G) total users	144,982	104,277	57,724	35,604
N/A					
	(H) total tweets	3,700,607	2,957,339	1,565,104	1,292,300





Every 50 kilometer buffer from New York



Each Frequency was normalized by the total number of users or tweets

Text analysis of tweets to discover global awareness/interest (source: Su Han's dissertation)

Findings



The distributional patterns of geographical awareness San Jose, CA VS Jacksonville, FL

The size of circle: the number of cities mentioned in tweets

Demo – Animated Flow Map



What is Big (and useful) Data in these cases?

- Foursquare and the enormity of potentially useful checkins as attractiveness indicator
- Millions of tweets mentioning cities around the world proxy for propensity to travel to those cities and social network relationships
- Movement of people across countries -> ability to go far beyond our usual analysis of long-distance travel