Toward a Localized Analysis of Quality Food Access On Chicago's South Side

Jessi Moths
University of Chicago
Environmental Studies
Class of 2010

What is a Food Desert?

- Somewhere without (m)any grocery stores?
- Somewhere without (m)any places to buy food?
- Somewhere where it is hard to access ‘healthy’ or ‘fresh’ foods?
- “Area characterized by its malfunctioning food system” (Raja et. al. 2008)

What is a Food Desert?

- History of the term: originated in UK literature about public housing tracts in the 1990s
- Even at origination, was never explicitly defined: "barriers to accessing healthy food", "unable to reach out of town supermarkets", "closure of local shops"

(Source: www.fooddesert.org)

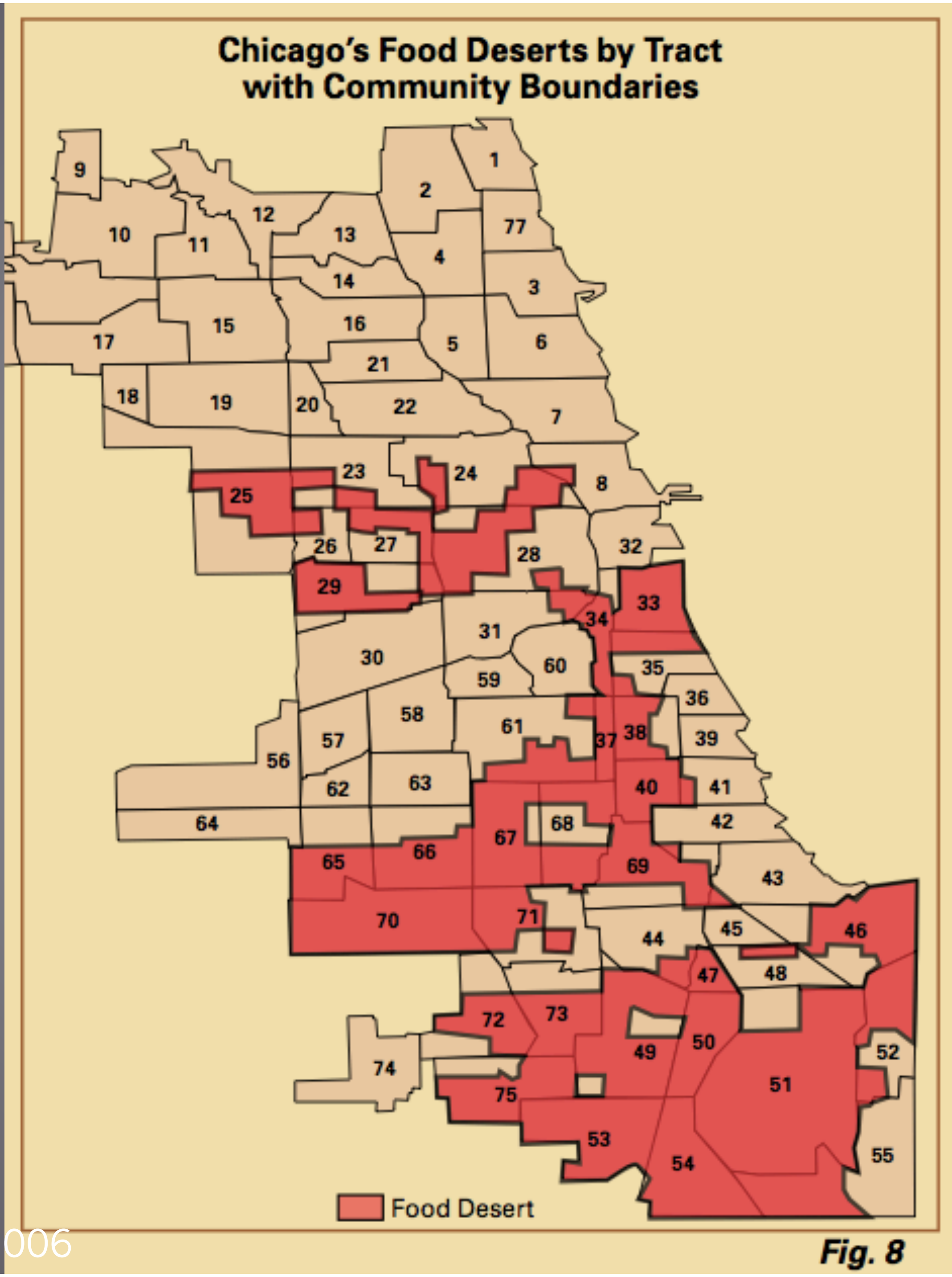
What is a Food Desert?

- Migrated into US literature
- Became policy/media buzzword for "food insecure," "low food access"
- Negative connotations?
- Studies tend to use it in a binary categorizing/comparative sense—x place is a food desert, y place is not

(Source: Raja et. al. 2008)

Food Access Research in Chicago

- Most cited study: “Examining the Impact of Food Deserts on Public Health in Chicago” by the Mari Gallagher Research Group, 2006
- Analysis of Chicago’s neighborhoods by their distance from a large grocery store; either ‘food desert’ or not
- Locational correlation with public health effects (diabetes, cancer, heart disease, etc.)
- Also includes analysis of concentration of fast food establishments within ‘food deserts’



Source: Gallagher 2006

The Gallagher Study: What is a Food Desert?

- "food deserts – large geographic areas with no or distant grocery stores" (6)
- One mile access radius—store within one mile of block considered accessible (12)

The Gallagher Study: What is a Grocery Store?

- “Chain grocery stores… Examples include Jewel, Whole Foods, Dominick’s Finer Foods, Trader Joe’s, etc.” (13)
- “Smaller and/or independent grocers, including those that focus on fruits and vegetables… as well as larger independent supermarkets” (13)

The Gallagher Study: What is NOT a Grocery Store?

- "'Convenience' and 'corner' grocery stores were excluded." (13)

Food Deserts and Policy

- Gallagher study widely cited, gave policymakers a PR reason to address food access
- IL-SJ0072, US H.R. 3100
- City incentivization for new chain stores
- Non-profit/third party grants to new grocery stores in ‘food desert’ regions
- Bottom line: if this designation is being used to make policy, it needs to actually reflect access!

The Corner Store

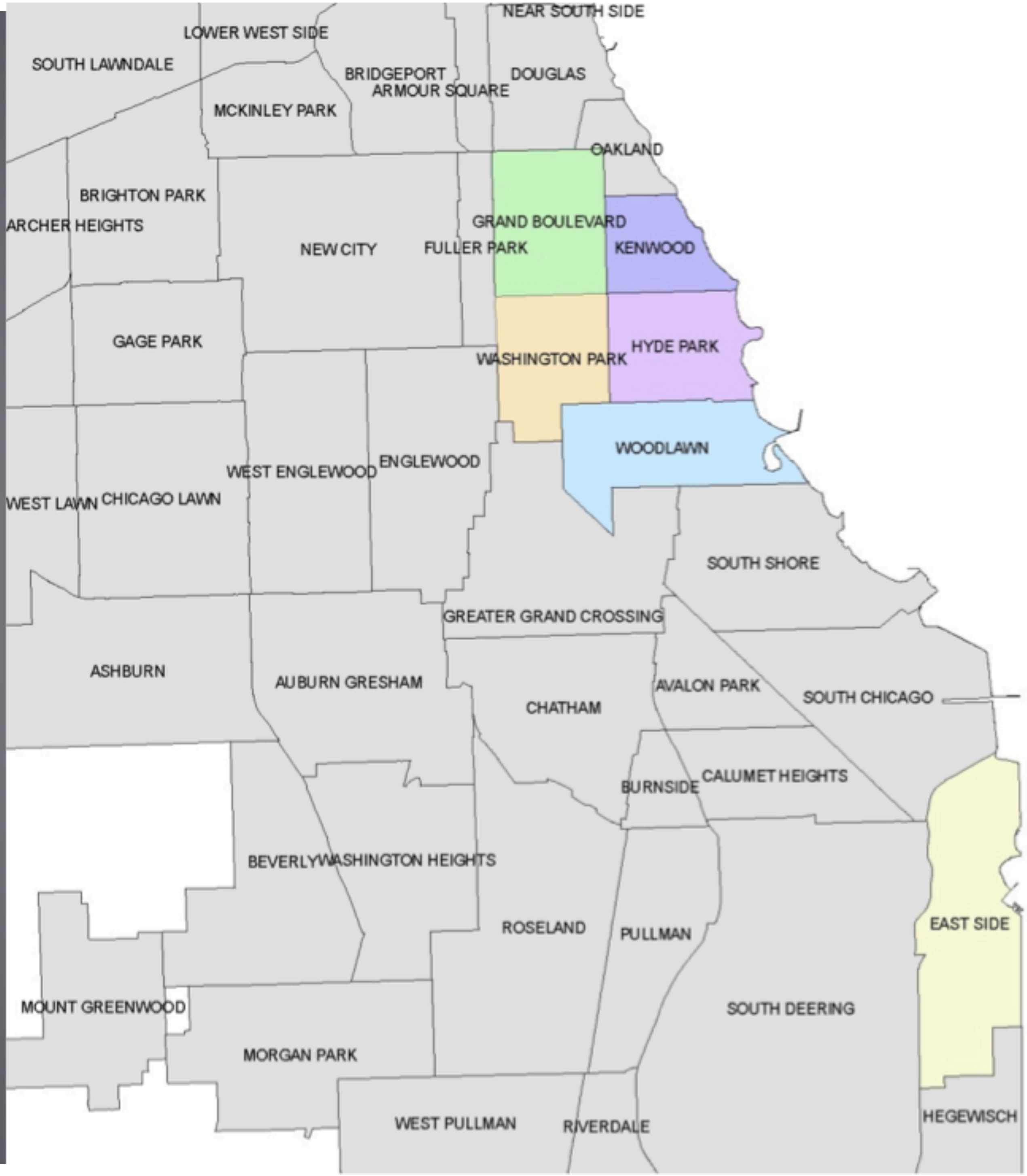
- Alwitt and Donley 1997: In Chicago, number of small stores/lack of large or chain establishments is one of the best indicators for poorness of a tract
- Gallagher's explicit exclusion of the corner/convenience store could, in effect, reduce her metric of "food desert" to more or less a proxy for poverty level
- Is this really an effective measure of food access for communities where there are many corner stores?

Our Questions

- How does food access *really* work on the South Side of Chicago?
- How do factors like transportation and retail makeup of the community modulate this?
- Should we really be excluding corner stores?
- Should stores within one mile really be considered accessible?
- Are more supermarkets the best solution?

Our Community Analysis

- Six neighborhoods/Community Areas: Hyde Park, Kenwood, Woodlawn, Grand Boulevard, Washington Park, East Side
- Three measures: car ownership, public transit access/time of trip, "staying power" (length of tenure) of corner and convenience stores


NEAR SOUTH SIDE
LOWER WEST SIDE
SOUTH LAWNDALE
BRIDGEPORT
DOUGLAS
ARMOUR SQUARE
MCKINLEY PARK
OAKLAND
BRIGHTON PARK
ARCHER HEIGHTS
GRAND BOULEVARD
NEW CITY
FULLER PARK
KENWOOD
GAGE PARK
WASHINGTON PARK
HYDE PARK
WOODLAWN
WEST ENGLEWOOD
ENGLEWOOD
WEST LAWN
CHICAGO LAWN
SOUTH SHORE
GREATER GRAND CROSSING
ASHBURN
AUBURN GRESHAM
AVALON PARK
CHATHAM
SOUTH CHICAGO
BURNSIDE
CALUMET HEIGHTS
BEVERLY
WASHINGTON HEIGHTS
ROSELAND
PULLMAN
EAST SIDE
MOUNT GREENWOOD
SOUTH DEERING
MORGAN PARK
WEST PULLMAN
RIVERDALE
HEGEWISCH

Demographics

Community Area	Median Income	% White	% Black	% Other	% Hispanic	% Below Poverty Level
Grand Boulevard	14178	0.6	97.7	1.7	0.8	46.9
Kenwood	36612	15.9	75.7	8.4	1.6	24
Washington Park	15160	0.5	97.5	2	1	51.6
Hyde Park	35991	43.5	37.7	18.8	4.1	16.5
Woodlawn	18266	2.8	94.2	3	1.1	39.4
East Side	39724	29.4	1	69.6	68.1	12.4

Source: US Census Bureau, 2000

Grocery Store Counts

Community Area	Total Stores	Total 'Grocery'	Total Chain (Local/ National)	Total “Major Player”
Grand Boulevard	13	3	0	0
Kenwood	3	2	1	0
Washington Park	8	2	0	0
Hyde Park	10	3	1	0
Woodlawn	18	4	1	1
East Side	11	3	2	2

Source: SSRM 2009

Major Player: Jewel, Dominick’s, Aldi, Cub Foods (MCIC 2003)

Methodology

- Six neighborhoods from the South Side Resource Mapping (SSRM) study
- Store data and addresses came from the field counts of stores in these communities
- Used ‘grocery’, ‘small grocery’, ‘convenience’ categories
- Excluded major player/chain locations, temporarily closed, out of scope
- 53 cases: 9 Hyde Park, 2 Kenwood, 16 Woodlawn, 8 Washington Park, 10 Grand Boulevard, 8 East Side

Methodology

- Car ownership data from the 2000 Census
- Data given as number of housing units per tract, so breakout by CA and percentage ownership rate calculated

Methodology

- GIS (ESRI ArcMAP) transit time modeling as a proxy for transit accessibility of region
- Two models: time to *nearest* store location, average time to *any (regional)* store location
- Both models indexed the quicker trip between walking and transit (including average wait time for bus)
- Assumption that trip is taken at a time when all regional routes are in service (morning or evening rush hours)
- CTA data was from pre-2010 service cuts

Methodology

- “Staying power” or length of tenure for corner stores via length of valid retail food establishment license for that address
- Gives a longer-term picture of access
- FOIA request from the Business Affairs and Consumer Protection license database
- Simple calculation of years held
- Disregarded changes in ‘operating as’ (name/ownership of business), gaps subtracted from overall years

Methodology

- Field visits for all corner store locations
- Evaluation of types of fresh food (if any) sold: produce, dairy, meats/fish, eggs
- Prices
- General impression

Car Ownership

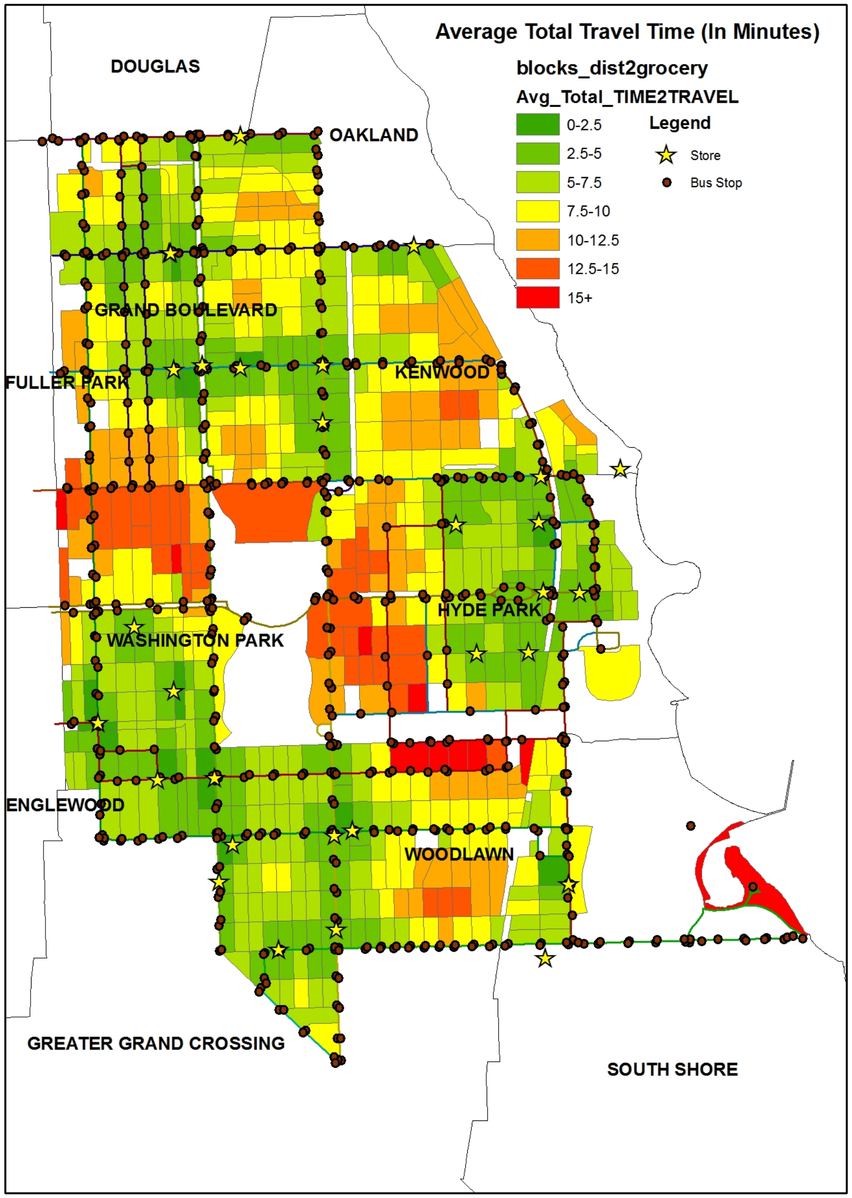
Community Area	# Units	% 0 veh	% 1 veh	% 2 veh	% 3+ veh
Grand Boulevard	9790	62.0	27.9	7.9	2.3
Kenwood	8935	37.2	47.4	11.9	2.8
Washington Park	4742	61.1	29.7	6.7	2.6
Hyde Park	14360	35.1	49.8	12.8	2.2
Woodlawn	10163	54.3	35.1	35.1	2.1
East Side	7399	15.8	40.5	32.2	11.4
AVERAGE OVER CA		*44.3*	*38.4*	*17.8*	*3.9*
Chicago ALL		*28.8*	*43.5*	*21.4*	*6.3*

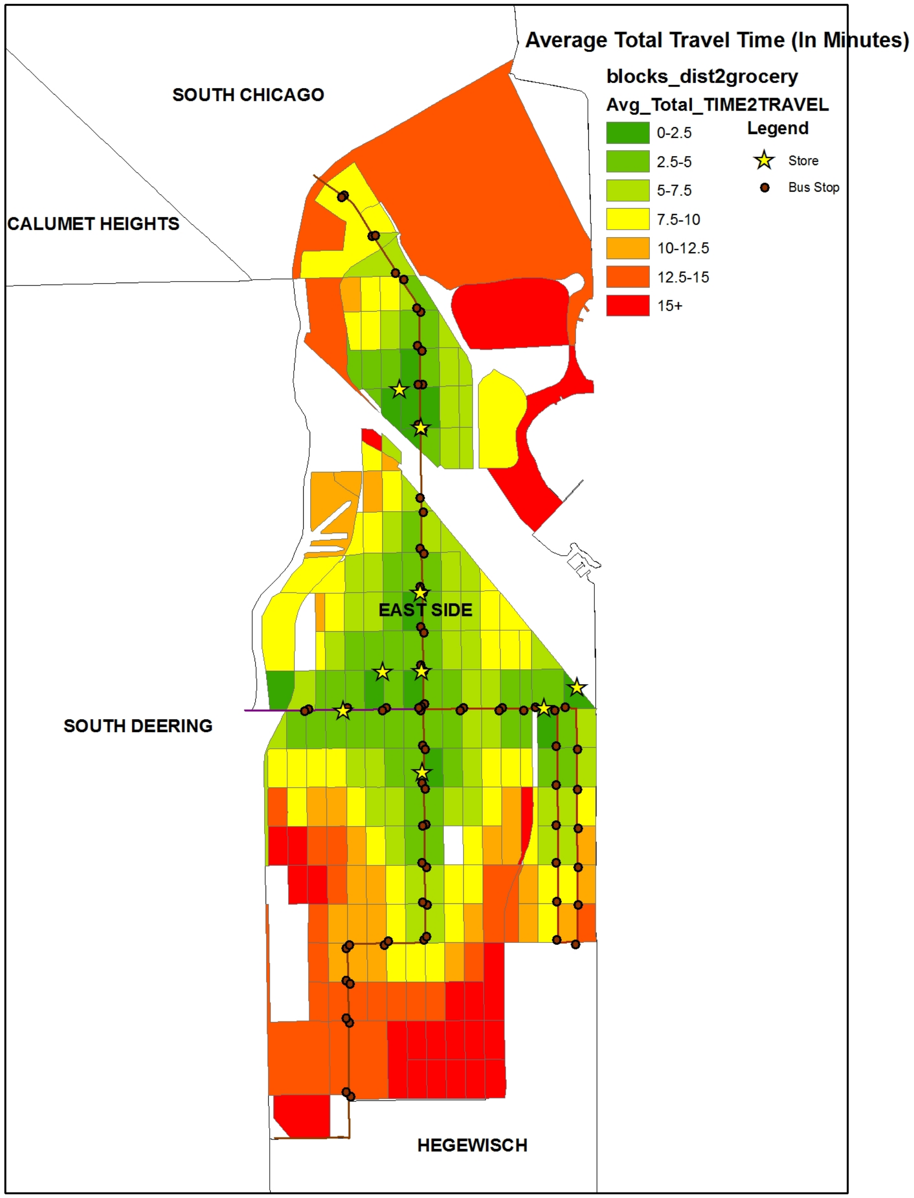
Car Ownership

- Grand Boulevard, Woodlawn and Washington Park all over 50% non-ownership
- Average over all CAs is significantly higher than the average in Chicago (44.3% vs. 28.8%)
- No ownership on South Side comparable to 1-car ownership over entire city

Transit

- Transit times to nearest location start at 0-2.5 minutes (walking), average at about 10 minutes, as high as 15+ minutes
- Transit times to any location average around 20 minutes, can exceed 30 minutes in fringe locations
- Maps show edge effects—need larger regional dataset


Average Total Travel Time (In Minutes)
blocks_dist2grocery
Avg_Total_TIME2TRAVEL
0-2.5
2.5-5
5-7.5
7.5-10
10-12.5
12.5-15
15+
Legend
Store
Bus Stop
DOUGLAS
OAKLAND
GRAND BOULEVARD
FULLER PARK
KENWOOD
HYDE PARK
WASHINGTON PARK
ENGLEWOOD
WOODLAWN
GREATER GRAND CROSSING
SOUTH SHORE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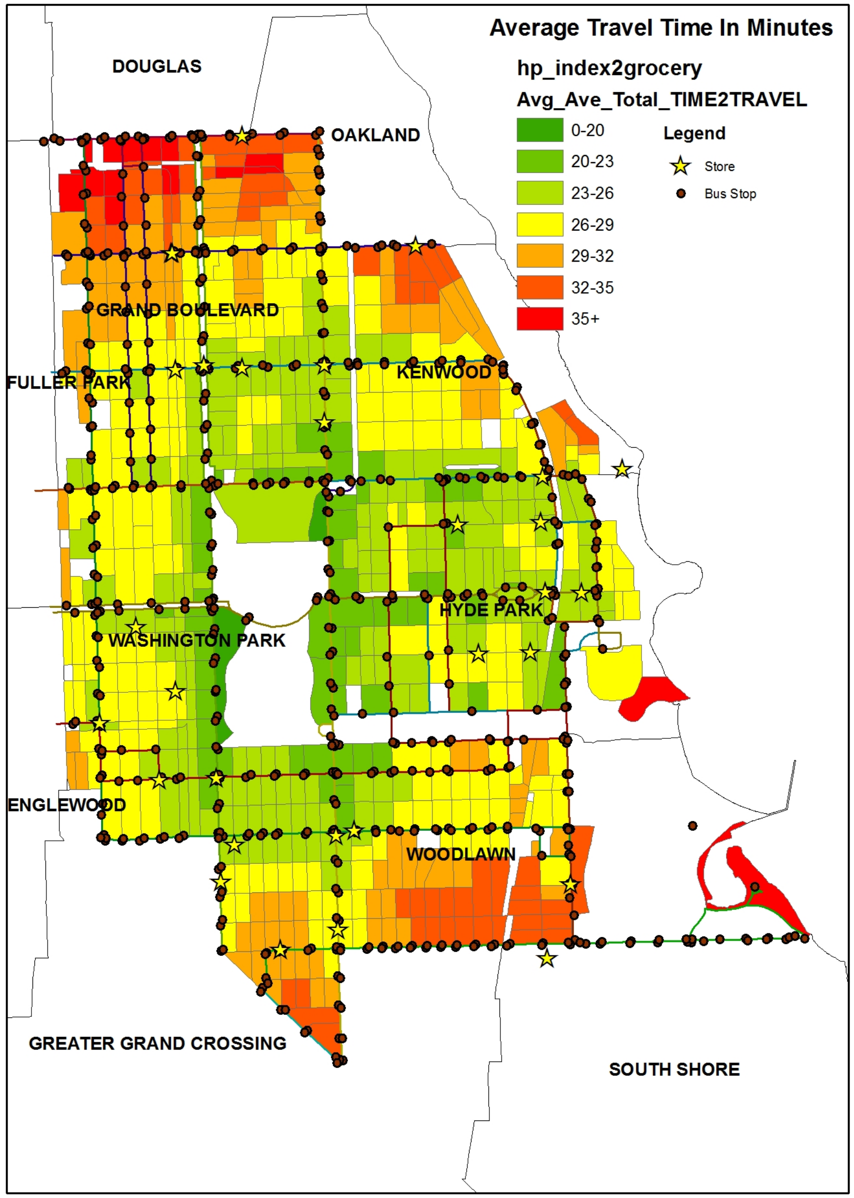
Average Travel Time In Minutes
hp_index2grocery
Avg_Ave_Total_TIME2TRAVEL
0-20
20-23
23-26
26-29
29-32
32-35
35+
Legend
Store
Bus Stop
DOUGLAS
OAKLAND
GRAND BOULEVARD
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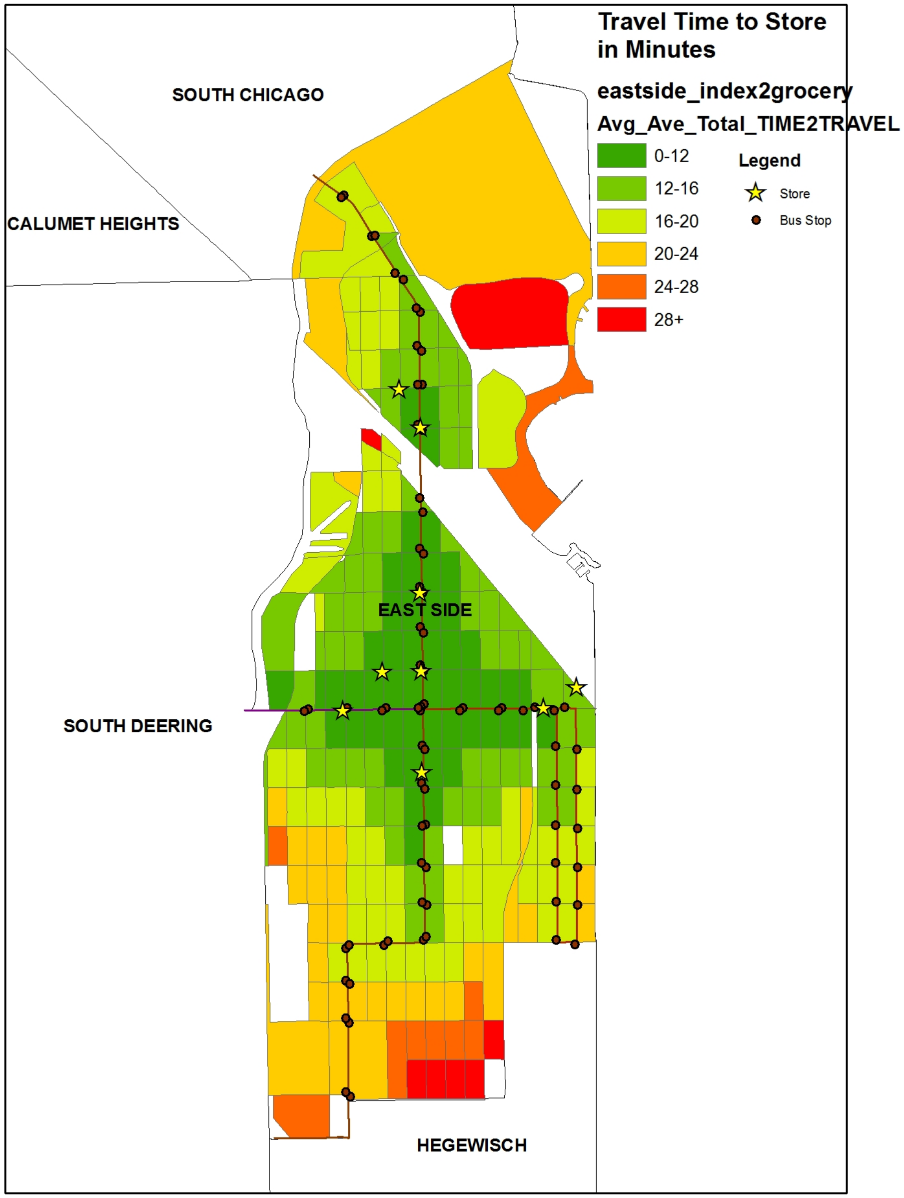
Travel Time to Store in Minutes
eastside_index2grocery
Avg_Ave_Total_TIME2TRAVEL
0-12
12-16
16-20
20-24
24-28
28+
Legend
Store
Bus Stop
SOUTH CHICAGO
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Staying Power

- 89% (49 out of 52) locations have been retail food establishments for five or more years
- 81% (43 out of 52) locations have been retail food establishments for ten or more years—only four fewer!

Staying Power

- In contrast, Northeastern Illinois Community Food Security Assessment (NICFSA) report, 2008: more chain stores left the South Side than opened in a five-year period
- Only 3 major players in all six neighborhoods, Grand Boulevard and Washington Park do not have a chain store (local or national)

Localized Access vs. Gallagher's Chicago

- Three conclusions:
  1. A one-mile radius does not accurately reflect accessible locations when
  2. Corner stores are more established than supermarkets on the South Side
  3. Corner stores can and should be a part of the access solution—supermarkets may not be the best option

Accessibility

- Many of these neighborhoods have half or more of their residents without reliable car access
- Transit is already slow—centralizing fresh food options will not help this
- A note about walking: planners agree that the furthest reasonable walkable distance for resources is about half a mile

The Urban Fabric

- Staying power shows that corner stores have longer tenure than supermarkets
- May not just be for reasons of accessibility (or economics) alone
- Supermarkets require lots of open space, introduce a lot of competition, not very walkable, high overhead
- Small decentralized locations make more sense in a dense urban environment

The Solution to Accessibility

- If grocery stores are not actually the best way to improve accessibility, why should they get all of the attention—and funding?
- Why not use existing infrastructure, i.e. corner stores, to introduce fresh foods?
- Also many creative options

The Solution to Accessibility

- NICFSA found that, in interviewing store owners, the greatest barrier to fresh food sales was economic (high start-up costs, concerns about waste, etc.)
- Fresh Food Financing Initiative (FFFI) in Pennsylvania—provides grants to existing grocers, including small stores, to encourage offering diverse fresh options at a local level
- Illinois Fresh Food Fund—presently only funding supermarket start-up

The Solution to Accessibility

- Non brick-and-mortar options
- Mobility -> accessibility
- NYC's "Green Cart" mobile food vendors
- New farmers market locations

For Further Exploration

- We need more data!
- Expansion of the SSRM data set
- Difficult to get accurate listings of South Side business without intensive field work—lots of turnover
- Regional perspective would help with edge effects, show interrelationship between neighborhoods (not islands!)

For Further Exploration

- Economic impact of long-term changes in food accessibility
- What happens when a new supermarket opens?
- Wal-Mart study by Loyola Center for Urban Research and Learning: 82/306 local businesses open when Wal-Mart opened in Austin (West Side) in 2006 had closed by 2008
- Do large supermarkets actually hurt accessibility?

Thanks to:

- Andrew Bauer
- Pamela Martin
- Todd Schuble
- Chicago Office of Business Affairs and Consumer Protection
- South Side Health and Vitality Study, South Side Resource Mapping team