

Transportation and Access to Employment in City Heights

Executive Summary

Professor Marlon Boarnet and Professor Genevieve Giuliano
Yuting Hou and Eun Jin Shin, Ph.D. Students

Sol Price School of Public Policy
University of Southern California

Research Objectives

The purpose of this research was to examine access to employment opportunities by car and by public transit among City Heights residents. We developed three access measures. We compared access for City Heights with (1) San Diego County averages and (2) fifteen comparison neighborhoods.

Research Approach

Measuring Accessibility

To compare access to employment opportunities from City Heights, we constructed three measures of accessibility:

1. Average census tract-to-census tract travel time, in minutes.
2. A cumulative opportunities measure which calculates the number of low wage/low skill jobs that can be reached from City Heights within 30-minute and 60-minute travel times.
3. A relative accessibility measure which compares low wage/low skill jobs to the potential low skill labor supply within 30 minutes. Larger values of this index indicate more jobs relative to the available labor supply.

All accessibility measures were calculated for car and transit travel, using minimum travel times for each mode, for peak and off-peak travel hours.

Comparison Neighborhoods

We chose fifteen comparison areas that are similar to City Heights in order to compare whether job access for City Heights residents is different from that of other similar communities. The selection of comparison areas was based on a statistical method that identified census tracts most similar to City Heights using the following variables: median annual household income, percentage African-American, percentage Asian, percentage Hispanic, share of residents foreign-born, unemployment rate, and percentage of population below the poverty line.

Findings

The automobile provides accessibility that is far superior to transit.

Auto accessibility is much superior to transit accessibility, no matter how measured. For example, using the number of jobs that can be accessed within 30 and 60 minutes, we find that there are 469,142 low-wage jobs within a 30-minute peak-hour car commute, compared to only 14,527 low-wage jobs accessible within a 30-minute transit commute, a ratio of about 30 to 1. At 60 minutes, nearly all jobs in the metro area are accessible by car, while transit access increases to about 156,000 low-wage jobs. The improved competitiveness of transit job access for a 60-minute commute threshold does not indicate that transit travel compares favorably to car travel. A 60-minute trip is a long one-way commute. In San Diego County, only 6 percent of all residents commute 60 minutes or more to work. Car and transit access is illustrated in Figure E-1. The first panel shows the area that can be accessed from City Heights within various travel times by car, and the second panel shows the same data for transit. It can be seen that the total area that can be accessed within 30 minutes (lightest grey shading) is much larger for car.

Public transit is a much slower mode due to both the sparse transit network in San Diego County, as well as the walk time required to reach stops and stations. If we assume that transit users travel to stops by car, the difference in accessibility is reduced, but car travel still remains about 20 times more accessible than transit for the 30 minute boundary. Transit access is relatively lower in San Diego than in larger metropolitan areas with more developed transit networks. For example, the same 30 minute access comparison results in a 12 to 1 car to transit ratio for Los Angeles, and 8 to 1 for Boston (see, e.g., Blumenberg, 2004, and Shen, 2001). Poor access by transit is likely a problem for many City Heights residents, because the rate of car ownership is low; about 17% of all City Heights households have no private vehicle, compared to 6% for the County. Table E-1 summarizes results for all access measures and comparison groups.

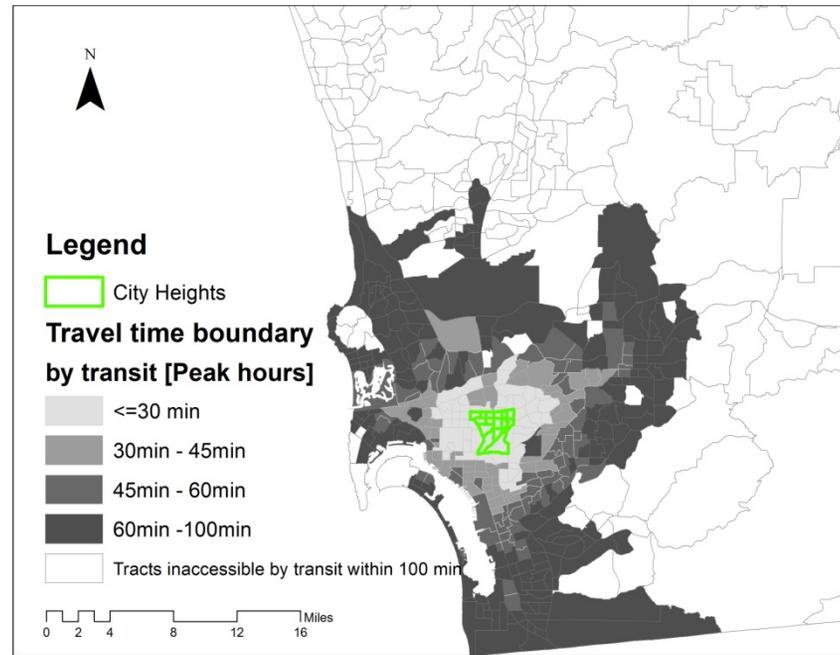
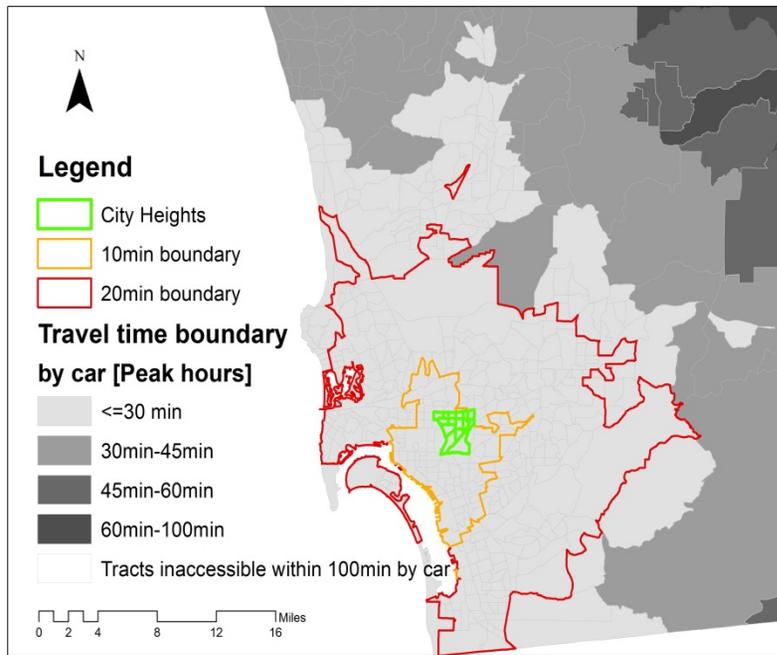


Figure E-1 Total area accessible within travel time boundaries, car and transit, peak hours

Table E-1 Three measures of accessibility in different areas

Area	Travel Mode, access to station ^a	Average tract-to-tract travel time (min)		Sum of low wage jobs accessible (30 min catchment area)		Sum of low wage jobs accessible (60 min catchment area)		Relative low-wage job accessibility (30 min catchment area)	
		Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak
City Heights	By Car ^b	22.65	21.71	469,142	479,213	634,783	637,347	1.34	1.32
	By Transit (+walk)	64	64.39	14,527	15,335	155,957	136,983	0.04	0.04
	By Transit (+bike)	60.01	60.95	27,346	27,170	189,888	159,760	0.07	0.07
	By Transit (+car+walk)	61.54	62.31	22,549	21,498	173,782	150,077	0.06	0.05
San Diego County	By Car	29.13	28.13	361,831	380,253	616,643	621,221	1.20	1.21
	By Transit (+walk)	71.72	71.31	12,820	12,505	83,396	77,885	0.04	0.04
	By Transit (+bike)	68.62	68.31	22,168	21,485	108,782	100,483	0.07	0.06
	By Transit (+car+walk)	69.64	69.27	17,704	17,127	98,447	91,749	0.05	0.05
Comparison Neighborhoods	By Car	24.89	23.92	416,591	435,218	628,287	632,540	1.25	1.25
	By Transit (+walk)	65.02	65.51	14,561	12,674	123,174	114,107	0.04	0.03
	By Transit (+bike)	61.47	62.05	27,192	23,418	161,382	141,544	0.08	0.06
	By Transit (+car+walk)	62.82	63.42	21,631	19,081	142,862	128,763	0.06	0.05

^a Access to the transit station is modeled for walking access to and from stations (+walk), bicycle access to and from transit stations (+bike), and car access to the trip origin station and walk access from the trip destination station (+car+walk).

^b Car access assumes car travel for the entire trip.

City Heights' access is not noticeably worse than access from comparison neighborhoods or the county average.

Our comparison of job accessibility in City Heights with that of other similar communities indicates that City Heights residents are not disproportionately disadvantaged. Table E-1 shows that access is quite comparable across all our measures. Average travel times are similar, and the very large difference between car and transit access is evident for City Heights, the entirety of San Diego County, and the City Heights comparison neighborhoods. Table E-1 also shows that both City Heights and the comparison neighborhoods have slightly better job access than the County as a whole. This is explained by the location of these communities near the core (downtown area). The County measure includes lower density suburban areas that are less accessible by car or transit, lowering the countywide access values.

The internal variations in job access within City Heights are large and possibly important.

We examined variations in job access within City Heights by calculating our access measures for each census tract. Figure E-2 gives results for the 30 minute access measure, car and transit respectively, in terms of the number of low wage jobs that can be accessed from each census tract. The City Heights census tracts are outlined in green in Figure E-2. Note that the scale is different from Figure E-1; Figure E-2 shows a subset of San Diego County, roughly from La Jolla in the north to Chula Vista in the south, to give a better visual illustration of the access variations with City Heights. The first panel shows that the highest car access is along the northern and southern boundaries of City Heights, which are areas that connect to major arterials (University Ave corridor) and the I-15 and I-805 freeways. The second panel shows more variation in transit access, with the northern area notably more transit accessible. There are express bus stops in the northern part of City Heights which contribute to that area's better transit accessibility. We also found that these census tracts have a larger share of transit commuters, compared with other tracts within City Heights.

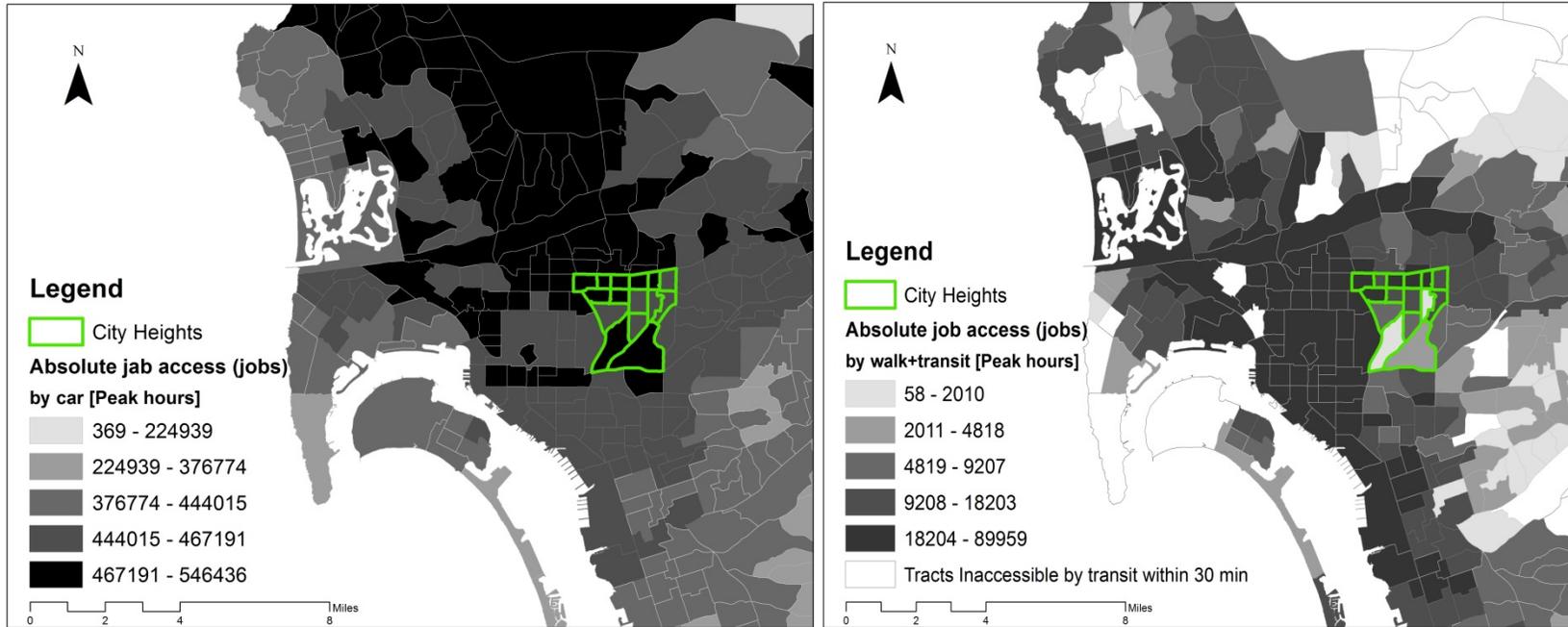


Figure E-2 Low-wage job accessibility within 30 minute travel time, car and transit (peak hours)

Policy implications

Our research suggests the following policy implications.

Car Access

Car access is far superior to transit access in City Heights and in most locations in San Diego. It would be difficult and costly to invest in the transit system in ways that would substantially close the car-transit access gap. Given that, one policy direction is to examine ways to increase private car ownership or car availability among residents of City Heights. We list a few options below.

- 1) Car-sharing: Private car-sharing services, such as ZIPCAR, are becoming popular but are still rare in lower income neighborhoods. Perhaps ironically, low-income residents might particularly benefit from the ability to “rent” rather than own a car. It would be useful to explore the likelihood of bringing car-sharing services into City Heights.
- 2) Ride sharing: City Heights residents likely already share cars or rides in an informal way. Methods to increase or formalize car-sharing, including social media applications, might be explored.
- 3) Car subsidies: Various programs, including some provisions in the 1996 welfare reform act, have provided subsidies for low income car ownership. Difficulties include interactions within government regulations and the cost of owning and maintaining a vehicle. Having said that, car ownership provides the best access for residents and might be preferred by some City Heights residents.

Transit Improvements

Most transit improvements would need to be system-wide to have an impact on City Heights. There may be localized transit solutions, in the form of express bus service or improvements in service frequency, which may increase access, particularly in more access-poor locations within City Heights.

Developing the Employment Base in City Heights

The top two policy solutions focus on linking City Heights residents to jobs. Bringing jobs into City Heights is an alternative or complementary strategy. The Price Charities have long worked to increase the job base in City Heights, and a strategy of bringing jobs into the neighborhood ought not be overlooked.