



Household and Trip- Making Characteristics of Zero Vehicle Households in Northeast Illinois

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HOUSEHOLD AND TRIP-MAKING CHARACTERISTICS OF ZERO VEHICLE HOUSEHOLDS IN NORTHEAST ILLINOIS

INTRODUCTION

The goal of this study is to look at zero vehicle households in the six county Northeastern Illinois region. Three tasks will be performed:

- 1) a brief comparison of zero vehicle households to all households in the region;
- 2) a comparison of one person households with zero vehicles by gender; and
- 3) an interpretation of a set of needs for occupants of zero vehicle households based on quantitative and qualitative survey data.

CHICAGO AREA TRANSPORTATION STUDY HOUSEHOLD TRAVEL SURVEY

The CATS survey is a home interview completed in 1994 which reflects the travel during an average weekday by households in the northeastern Illinois region. This database contains three linked files with 19,314 households, 40,568 persons and 162,755 trips.

The following variables will be used in the overview of zero vehicle households:

Household Data:

- total persons
- number of vehicles owned
- household income level

Person Data:

- age in years
- sex
- total trips made

Trip Data:

- mode
- trip length

COMPARISON OF ZERO VEHICLE HOUSEHOLDS TO TOTAL HOUSEHOLDS

Zero vehicle households differ from total households in several ways which will be presented in plot form. These differences are:

- geography
- household income
- number of persons in the household
- household type
- average trip length
- mode of travel

76% of the residents of zero vehicle household live in the City of Chicago while 38% of the total households reside in the City of Chicago. 37% of the zero vehicle households are in the lowest income category, less than \$15,000, while 12% of the total households are in that category. One person households provide 60% of the zero vehicle households and 26% of the total households. Household relationship type differs as well. Households with one adult and one child under 14 make up 3.6% of the zero vehicle households and 1.4% of the total households. The mean trip length was lower in the set of zero vehicle households than in the set of total households. Auto driver dominated the mode used by all households while walk and bus were used most in the zero vehicle households. These six differences in the sample sets are presented in graph form in Figures 1-6 as well as in tabular form in Appendix 1.

Figure 1
Total Vs. Zero Vehicle Households by County/City

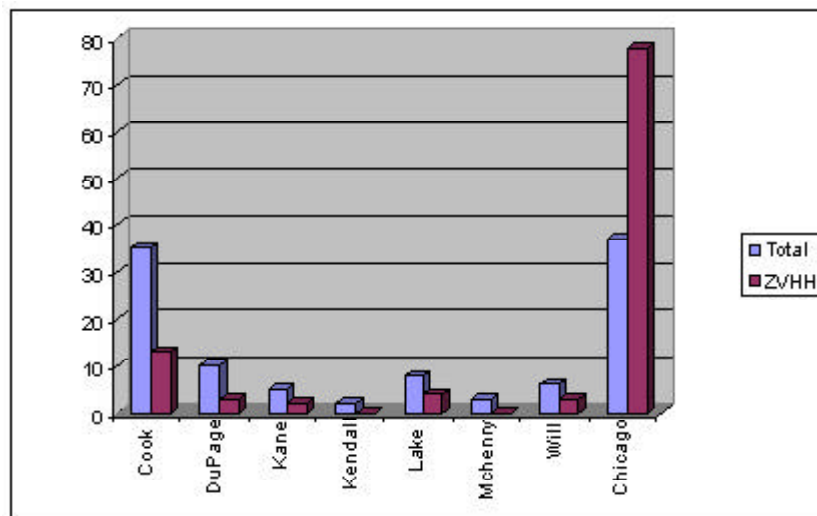


Figure 2
Total Vs. Zero Vehicle Households by Household Income

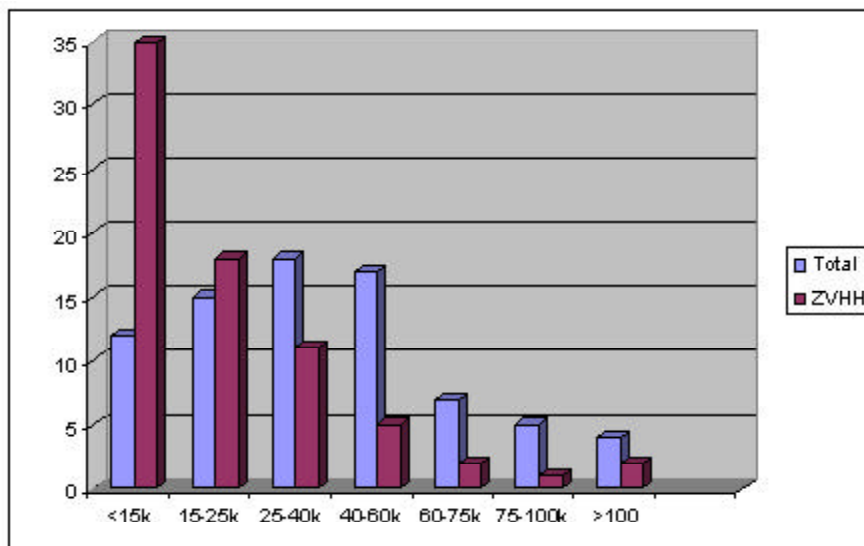


Figure 3
Total Vs. Zero Vehicle Households by Number of Persons

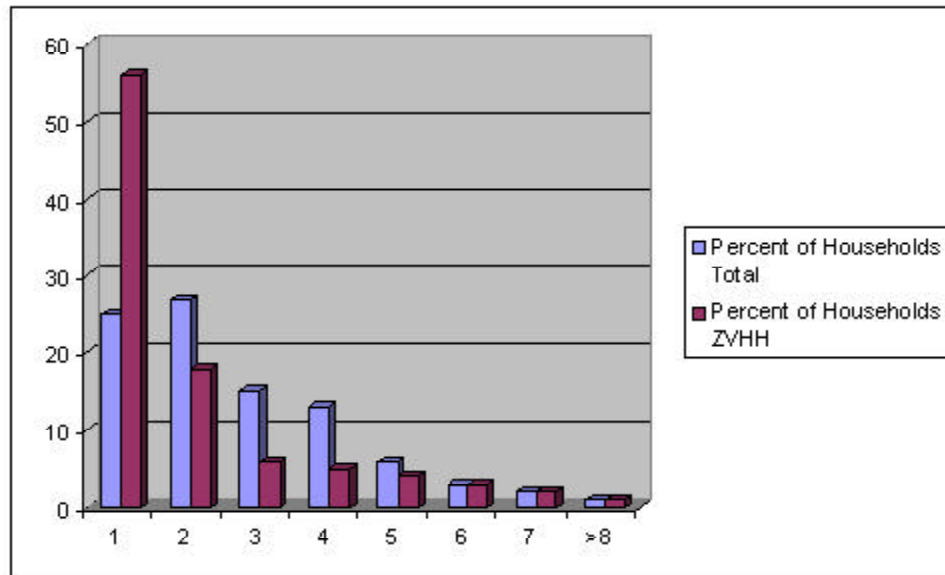


Figure 4
Total Vs. Zero Vehicle Households by Household Type
(HH type adults: children)

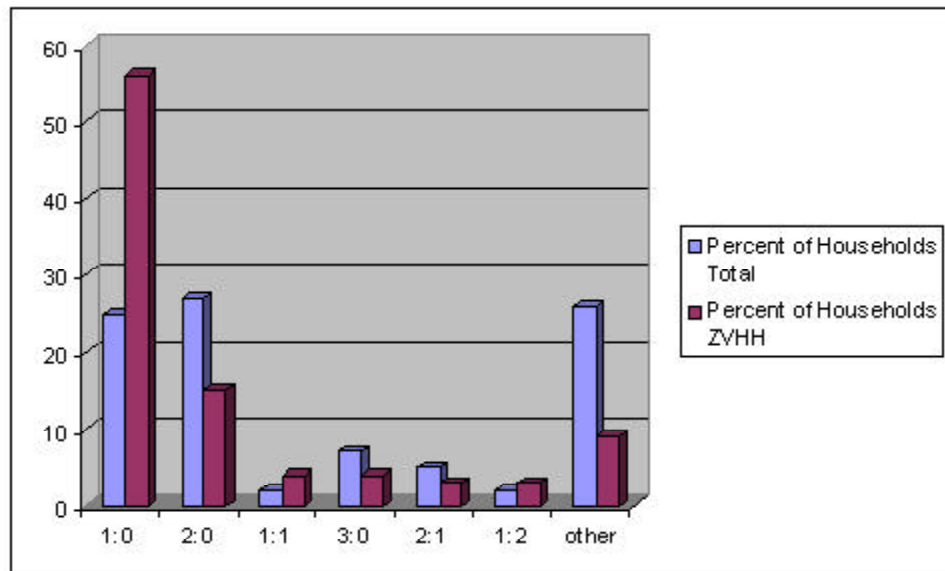


Figure 5
Total Vs. Zero Vehicle Households by Trip Length

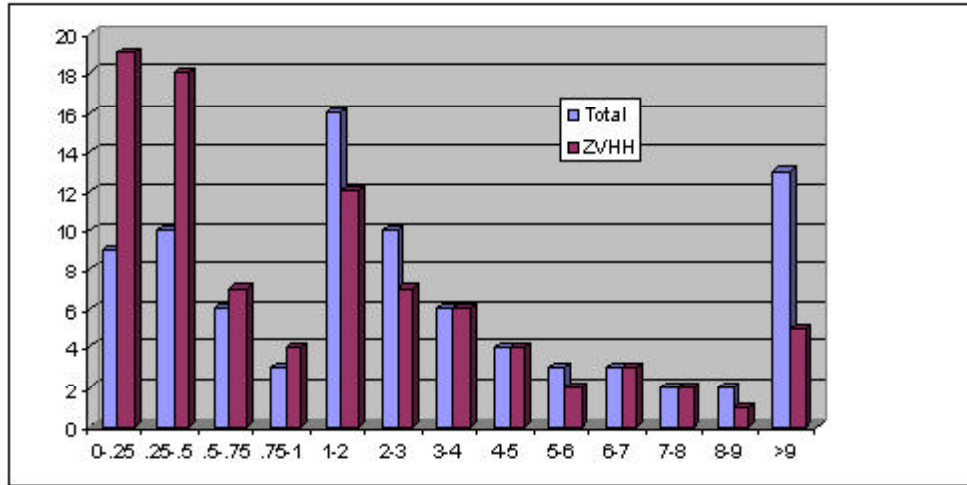
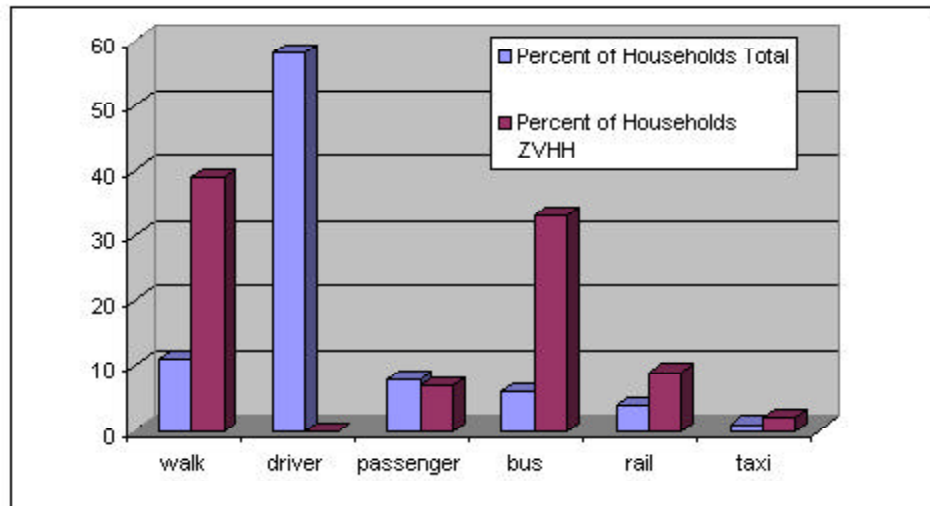


Figure 6
Total Vs Zero Vehicle Households by Mode



COMPARISON BY GENDER IN ONE PERSON ZERO VEHICLE HOUSEHOLDS

One person zero vehicle households were chosen for further analysis. This sample set had 805 un-weighted households to examine. These households may be broken down as follows:

75% female and 25% male;
33% had household income less than \$15,000;
54% retired;
38% working full or part time;
32% made no trips, 24% made 2 trips per day;
10% under 30 years of age, 30% 30-60 years; and 60% over 60 years;
43% of trips were by walking, 29% by bus, 9% as auto passenger and 3% by taxi.

Some of these results will be presented by gender. Of the 32% of the sample set that had income less than \$15,000, 83% were female and 17% male (Figure 7). The proportion that each sex made up of each age group showed a higher proportion of females in most of the age groups and particularly in the older age groups. Although females were making 65% of the total trips, they were represented disproportionately as bus riders (72%) and auto passengers (86%).

Mode by gender may be examined more closely by controlling for household income. This examination showed roughly similar proportions of same income females and males making walking, bus and auto passenger trips. Trips by taxi made by males in the highest income category occurred at four times the rate of females in that category; trips made by males in taxis also occurred at three times the rate of females in the lowest income category. These results may be found in Appendix 4.

QUALITATIVE COMMENTS

The CATS Household Travel Survey allowed respondents to note why no trips were made on the study day. This data provides an insight into some characteristics of the low income female population who live alone without an automobile. The data suggests that this population makes up a large part of the zero vehicle database. The reasons for no trip being made may be categorized as shown in Table 1: Reasons for Making no Trip in Zero Vehicle Households.

This qualitative data along with the quantitative results shown above suggest several policy directions, particularly for the transit service providers that serve the City of Chicago. These include:

- transit fares based on distance; since households with no automobiles travel shorter distances;
- subsidy of taxi use by low income households since this mode seems to be attractive even to travelers with low household incomes;
- more demand response transit service since this mode simulates taxi service but at a lower price;
- greater attention to transit security since this concern affects the aged and infirm population to a greater extent than it affects the general population.

Table 1
Reasons for Making No Trip in Zero Vehicle Households. Health and Age

Health and Age	Lack of Need	Auto Centered Traveler
Blind	No need	Car being repaired
Disabled	None needed	Don't drive
Doesn't travel	No place to go	Car in body shop
Handicapped	No reason to leave	No car available
Half blind		Licence revoked
Had the flu	Home as work (paid or unpaid)	No car
Arthritis		No transportation
Too old only doctor		Walked everywhere
Does not travel	Disabled husband	Car broke down
Poor health	Spring house cleaning	
No trips too old	Baby sitter	
Ill health-age	Research paper	Need for companion/security
House ridden	Had company	No one took her
	Stayed with kids	Unable to travel alone
	Did yard work	I live alone
Other	Too busy	Don't use public transportation
	Laundry	
Bad weather	Prepare for weekend	
Didn't want to	House cleaning day	
No sitter for child	Housework to do	
Better things to do	Doesn't go out	
	Yard work to do	
	Worked around the house	
	Cared for an ill person	
	Just had a baby	

ACKNOWLEDGMENTS

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RESOURCES

Chicago Area Transportation Household Travel Survey, Information Services Division, 1994.