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ANALYSIS OF SECTION 8 VOUCHER RECEIPIENTS IN
PONTIAC, OAKLAND COUNTY, MICHIGAN

presented by

ARUN NEUPANE

has been accepted towards fulfillment
of the requirements for the

M.S. degree in RESOURCE
DEVELOPMENT/URBAN
AFFAIRS

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**ANALYSIS OF SECTION 8 VOUCHER RECEIPIENTS IN PONTIAC, OAKLAND
COUNTY, MICHIGAN**

By

ARUN NEUPANE

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

MASTER OF SCIENCE

**DEPARTMENT OF RESOURCE DEVELOPMENT
& URBAN AFFAIRS PROGRAM**

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ABSTRACT

ANALYSIS OF SECTION 8 VOUCHER RECEIPIENTS IN PONTIAC, OAKLAND COUNTY, MICHIGAN

**By
ARUN NEUPANE**

Section 8 Housing Choice Vouchers are a popular form of housing subsidy for low-income renters. One of the alleged benefits is their potential in providing residential mobility and thus enabling the poor to escape from poverty areas to areas that are more mixed-income and more racially diverse. The research analyses the relocation outcome for a group of voucher recipients in Pontiac Michigan, based on their pre-move and post-move census tract characteristics. Simple spatial analysis involving overlays of address location of vouchers on distribution various social indicators at census tract level is used to assess success in dispersal. The difference between pre-move and post-move census tracts in measures of poverty level, racial composition, household income and employment are statistically significant. The comparison suggested that the voucher holders did move to areas that are dissimilar to the ones they left, registering marginal gains in terms of decreased poverty and increased diversity in destination tracts. However, the post-move tracts, in absolute terms, are still the poorest tracts in Oakland County and have a very high proportion of minority. Voucher recipients also concentrate on tracts that are most distressed for indicators of distress like reliance on public assistance, adult illiteracy, and proportion of female-headed households.

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Introduction

Overview

In the United States, concentration of poverty in the inner cities is a well-known challenge for urban policy maker. The inner city residents face an array of disadvantage like high crimes, poor education, joblessness, and poor quality housing, compared to the residents of the suburbs (Turner, 1998). Moreover, the problem is perceived to be more serious since the effect of concentration is cumulative—poverty seems to yield more poverty and distress (Orefield, 1997; Galster and Killen, 1995). This has given the rationale for anti-poverty strategies that aim to deconcentrate poverty, in order to alleviate it. Hughes (1995) classifies anti-poverty strategies into three general categories—development, dispersal and mobility. The development strategies include in-place approaches to deal with poverty in the inner cities. Mobility strategies attempt to connect the disadvantaged poor in the central cities to the opportunities by way of commutes and networking.

Dispersal strategies aim to move the poor themselves, and try to change their geography or opportunity. The goal of the dispersal strategy is to help the families move from disadvantaged neighborhoods to neighborhoods that are richer and more racially diverse.

Housing Choice Vouchers¹ are rent subsidies given by the department of Housing and Urban Development (HUD) to qualifying low-income families to find a decent rental unit in the private market. The intended outcome of the dispersal is that those families also achieve residential integration into mixed race and mixed class neighborhoods, away from mostly segregated, poor neighborhoods. Housing vouchers are supposed to be a relief for the low-income families compelled to live in poverty of the central cities due to financial constrain (Turner, 1998). The rent subsidy makes better housing in better neighborhood more affordable for the poor. The vouchers work like this. The tenant pays at least 30% of her income towards the rent and the rest is covered by the voucher, but only up to the Fair Market Rent (FMR) value. The FMR, set by the HUD, for a metropolitan area or a city sets the upper limit for rent that can be paid using the voucher. It is calculated based on distribution of rents in the private market in the designated rental market².

Purpose of the study

Overall purpose of the research is to explore effectiveness of Section 8 Housing Choice Vouchers in achieving the desired dispersal, or deconcentration of poverty in Pontiac, Michigan. The objective is to assess whether there is any difference between tract characteristics of the origin and destination location of voucher recipients. If the vouchers were working, in their function as a deconcentration tool, one would find that on average,

¹ Housing Choice Vouchers earlier existed in form of either Certificates or Voucher, which are now consolidated

² The rent calculated by the HUD at 40th percentile of distribution of rents in the relevant local/metropolitan housing market (source: <http://www.huduser.org/datasets/fmr.html>)

the new locations would exhibit lower poverty rate, higher employment and lower proportion of minority in population.

One would also expect some evidence of physical dispersal: the new locations would be more spread out than the original locations with appreciable average distance covered in the move. This will also be investigated in the study.

Scope of the study

According to HUD (2000), Section 8 Housing Choice Vouchers have been very successful in improving housing opportunities for the 1.4 million households, nationwide. This study is only limited to the Oakland County and the city of Pontiac in particular, therefore the conclusions will only apply to Oakland County, Michigan.

The nature of data analysis attempted in this study is simplistic-it is not based on survey data of individuals voucher recipients, as is the case in other such studies on effectiveness of mobility programs. (See Katz et. al, 2001; Rosenbaum and Harris, 2001, for example). All the analysis is based on Census Tract characteristics of average Origin Tracts and the average Destination Tracts of the voucher recipients. Therefore the study is limited to comparison of neighborhoods, and the Census Tract characteristics are assumed to approximate neighborhood characteristics. The data item obtained for the study were only the addresses of the voucher recipients, which included those that received vouchers

distributed by the Pontiac Housing Commission, and who were also able to relocate to a new address using those vouchers.

Neighborhood effects and rationale for housing mobility programs

There is a wide body of literature that point to the evidence that where individuals live affects their opportunities and life outcomes (Galster and Killen, 1995; Rosenbaum, 1991,1995;Turner, 1998). The theory suggests that individual achievements (like motivation to seek gainful employment or performance in school) are as much a function of the neighborhood or the immediate social network, as it is a function of family background. Galster and Killen (1995) modeled youth's decision-making behavior and concluded that the local social network has an important effect on youth's decisions regarding education, fertility, work, and crime. Similarly, Rosenbaum (1991, 1995) studied the participants of the Gautreaux Assisted Housing Program³—a landmark, supreme-court mandated, dispersal strategy that required Chicago Public Housing Authority to relocate low-income black families to mixed income and mixed race areas—and found some encouraging results suggesting that the place matters.

He found that the participants that moved to the suburbs, compared to the ones that moved close to the city (closer to their origin) benefited from residential integration in the

³ In Gautreaux, the courts found that the Chicago Housing Authority (CHA) and the Department of Housing and Urban Development (HUD) had discriminated against the black tenants, concentrating them in large-scale developments located in poor, black neighborhoods. The decision against CHA in 1969 called for the creation of new public housing at “scattered sites” in non-minority communities. The court also ordered a relief in the form of 7,100 Section 8 certificates (now called Housing Choice Vouchers) to current and former CHA residents to use in the neighborhoods that were less than 30 percent black.

several key areas. The suburban movers had higher adult employment rate, better prospect of youth's education and employment, and the children among the suburban movers were more likely to be in school, more likely to be in college-bound tracts in school, in jobs and in jobs with benefits and better pay (Rosenbaum 1995: pp 264). In addition to better availability of jobs, suburbs also housed the 'role models' that were achieving success, finding and keeping jobs, and getting their kids educated in good school. He also cites the result that suburban move lead to better social integration of blacks with whites (Rosenbaum, 1995).

In order to determine further whether residential mobility programs improve the life chances of the poor families through the alleged neighborhood effect, the HUD implemented Moving to Opportunity (MTO) Demonstration Program for the period of 1994 to 1998. Some analysis of early results is encouraging. The experimental design in MTO is an explicit random assignment of participants and this is thought to make the results more valid than that of Gautreaux (Shroder, 2002). The MTO program was conducted in Baltimore, Boston, Chicago, Los Angeles, and New York. Early results from Boston and Chicago will be discussed here.

The MTO program offered housing vouchers to very low-income families living in public housing projects in tracts that had high poverty rate (greater than 40 percent), and randomly assigned these families into 3 groups. The first experimental or the MTO group received housing counseling and were also required to locate to census tracts with population poverty rate less than 10%. The second group—regular Section 8

Comparison—was given the housing vouchers too, but they did not have any locational constraints. They could move anywhere, even in areas of high poverty if they wished.

The third group was the control group, which just remained in the Inner City Public Housing establishments. They could move if they wished, but on their own—they did not get the vouchers. Rosenbaum and Harris (2000) and Katz et. al (2001) have studied the early results of the MTO experiment for Chicago and Boston, respectively.

Rosenbaum and Harris (2001) based their finding on post-move telephone surveys data of individual householder supplemented by pre-move baseline survey data to assess social gains of the move. For both the MTO and the Section 8 comparison group, they find that the proportion employed and the proportion in the labor force increased. Employment for Section 8 Group increased from 29.3 % to 42.9%, and the same for the MTO group increased from 24.5% to 46.3%. The survey data also showed significant improvement in housing satisfaction in their new location, for all the movers. (Rosenbaum and Harris, 2001). Although both the groups moved to areas that were very different from their origins, MTO group was more successful in locating to suburban areas.

Katz et. al (2001) also evaluated short terms results of MTO program in Boston. Their results also provide some evidence that moving to opportunity did bring yield some improvements for the movers. They also had the same benefit of MTO household-head survey data for 540 households, taken before and after the move. Their significant finding is in the area of children's mental and physical health. Compared to the control group

they find that the MTO and Section 8 groups experienced gains in terms fewer behavior problems among boys.

These results from the MTO demonstration program, coupled with experience from Gautreaux program, do offer some evidence that place matters: that people from poor, segregated areas improve their lives if relocated to wealthier and diverse neighborhoods. However, whether all the mobility programs manage to relocate the poor to the right areas is a separate issue. In the following chapter, success in residential integration using the regular Section 8 vouchers will be discussed in more detail.

Section 8 Vouchers: History and review of success

Section 8 tenant-based vouchers and assisted housing policy

Public housing policies of the past have had significant impact on concentration of poverty as well as of minorities in the inner cities (Turner, 1998). The above-mentioned Gautreaux program is a result of such a revelation. In 1965, Black residents of public housing (represented by Gautreaux) filed a civil rights suit alleging that public housing in Chicago was segregated (Rosenbaum, 2000). The ruling called for a reversal of that trend of segregation and demanded that the Chicago Housing Authority actively seek new developments at scattered sites and that the residents get housing vouchers to relocate to non-minority areas in the suburbs (Rubinowitz and Rosenbaum 2000)

In the housing policy environment, tenant-based rental subsidy like Section 8 Housing Choice vouchers gained increasing popularity, especially in recent years. While there were only 0.6 vouchers and certificates for each unit of public housing produced in 1970s, there are 4.75 voucher per a unit of existing public housing now. Cost-effectiveness of vouchers is one obvious reason for the shift (Shroder and Reiger, 2000). The other important reason, as hinted by Hartung and Henig (1997), is the perception that vouchers help deconcentrate poverty, and enable the low-income families move out to better opportunities. Especially, given the opportunity for deconcentration where 59% of all public housing residents live in high poverty areas (Turner, 1998). The success of

residential mobility program like the Gautreaux program has further propelled the shift in favor Section 8 vouchers.

Along with deconcentration, Section 8 vouchers were also seen as a tool of desegregation. If given the choice, it is assumed that poor blacks for example, would disperse and integrate into areas that are predominantly white.

Housing and Community Development Act (1974) stated the following to be the goal of Section 8 Program:

“..reduction of the isolation of income groups within communities and geographical areas and the promotion of an increase in the diversity and viability of neighborhoods through the spatial deconcentration of housing opportunities for persons of lower income.”

[Housing Act, 1974]

The act implies that diversity, or a racial integration, is an explicit and desired goal of the Section 8 program. Section 8 vouchers therefore emerge as the low-income housing subsidy with two-pronged goal—deconcentration of poverty and desegregation. Another intended outcome of Section 8 vouchers seems to be spatial dispersal. The degree of dispersal can be measured using spatial tools, in order to gauge the success Section 8 program and this is attempted in the study.

While there have been elements of success in residential mobility programs, like in that of the MTO demonstration or the Gautreaux program, the success of regular Section 8 Vouchers, in terms of achieving these the same objectives seems to be mixed.

Section 8 vouchers: review of success

In the MTO studies for Chicago by Rosenbaum and Harris (2000), the average destination tract for Section 8 group in the demonstration still had high minority dominance (90% Non-Hispanic Blacks). Also, only 1.9% of the Section 8 Group landed in suburban tracts, while same rate for MTO group was 31.0%. In the case of MTO, better success can be attributed to the better treatment received by the MTO group who were better informed about the metropolitan housing opportunity through locational counseling.

HUD (2000) claims that families with Section 8 assistance are much less concentrated than those in public housing, and the families who move to the suburban areas do the best. This is shown to be true for most of the studies on Section: that these tenant-based program have been successful relative to project-bases subsidies to public housing in achieving the goal of economic integration and mobility.

Turner (1998) finds that vouchers and certificate holders typically live in neighborhoods that have poverty rate lower than those in and around public housing projects. However,

the full potential residential mobility offered by the Section 8 vouchers do not seem to have been realized.

Hartung and Henig (1997) analyzed census tract locations of over 1000 certificate and voucher households in the Washington D.C. and its suburbs, and compared those with public housing and other project-based subsidies. They also find evidence that Section 8 vouchers may be succeeding in dispersing affordable housing opportunities beyond the central city boundaries. They mention that compared to the disproportionate distribution of public and project-based housing—300% and 175% respectively of the fair share if it were distributed evenly throughout the census tracts—certificates and vouchers are much more evenly distributed, with average tract having 9.2 certificate households and 3.2 voucher households.

However the authors also find some evidence of re-concentration within the suburbs: the vouchers in the suburban jurisdictions were found to be concentrated in high-minority, low-income tracts (Hartung and Henig, 1997).

Turner (1998) also finds that vouchers and certificates are at least better dispersed than public housing. She finds that nationally, voucher households are far less likely than public housing residents to live in high-poverty neighborhoods. Only 14.8 percent of voucher recipients live in high-poverty neighborhoods (greater than 30 percent poor) compared to 53.6% for public housing residents (Turner, 1998). She also warns however, that there are differences within race: the share of Blacks and Hispanic

certificate holders living in high-poverty neighborhoods is much higher than the share of whites. (Turner, 1998)

Varady and Walker (2000) analyze the mobility outcome of a group of public housing residents that were given housing vouchers to move out from their public housing establishment that were demolished. They find that participants moved only short distances and the majority continued to live in racially segregated neighborhoods. Measured at a census block group, they found that recipient's post-move neighborhood had only marginally lower percentage of African-American population.

Pendall (2000) classified more than 44,000 metropolitan census tracts across the nation for distress levels (mild or severe) and compared proportions of Section 8 renters, poor renters and all other renters in the metropolitan distressed tracts. He found that the Section 8 tenants were better than other poor tenants in terms of their location in non-distressed tracts. However, compared to all other renter households in US metropolitan tracts, Section 8 tenants still lived in disproportionately distressed neighborhoods. Pendall (2000) also speculates on why the vouchers concentrate in distressed tracts and contends that vouchers concentrate in distressed tracts because rental housing also concentrates there.

Data and Methodology

Description of data

Most studies that have studied relocation success have followed the voucher recipients from the origin to destination locations. In such studies, baseline survey and post-move survey of the participants themselves is the method used to elicit indicators of success (see Rosenbaum, 1995; Katz et. al, 2001).

In this study, the data available is only the addresses of the voucher recipients. 500 pairs of addresses (1000 in total) of Section 8 voucher recipients were made available from the Pontiac Housing Commission. These addresses were linked to their corresponding census tracts to determine 'average' neighborhood conditions at the origin and the destination. All analyses assume that census tract characteristics of a particular address reflect the neighborhood conditions of that location.

All of these participants were living in public housing maintained by the Pontiac Housing Commission before they received the vouchers. Although the exact period of the movement for these movement is unknown, it is known at least that they moved between 1995 and 2000 and that a significant majority of the recipients are African-Americans⁴).

⁴ Personal Communication with Dr. Darden, Urban Affairs Program, MSU

Of the 500 addresses that included destination and origin address for each voucher recipient, corresponding census tracts could be verified for only 459 pairs. Among these, 72 individual households (15.7%) moved within the same tract—the corresponding census tract was the same for both the origin address and the destination address. These pairs are excluded from the main analysis. Table 1 shows the breakdown for the original data pool of 500 pairs of addresses. The final sample size is 387 pairs.

Table 1: Breakdown of 500 pairs of addresses

Characteristics of Addresses	Number of address pairs	Percentage of Total	Percentage out of the Total Matched Pairs
Matched pairs	459	91.8%	
Same tract movement	72	14.4%	15.7%
Inter-tract movement [The Study Sample]	387	77.4%	84.3%
Removed from original 500 due to unconfirmed address for both origin and destination	20	4.0%	
Removed from original 500 due to unconfirmed address for either origin or destination	21	4.2%	
Total in the Study	500	100.0%	

The total number of census tracts contained in the sample of 387 pairs of addresses is 55. Most of the origin tracts are in Pontiac, Oakland County of Michigan (26). For the rest of the origin tracts, 7 are from other counties within Michigan and 14 tracts are from counties outside Michigan. Most of the destination tracts in the sample are in Oakland County, except in one case where destination is Osceola County Florida.

Quantitative analyses include census tract data of all 55 tracts—even of those outside Oakland County Michigan. Qualitative analysis—spatial displays/interpretations—are however limited to movement within the Oakland County.

Variables of interest

The objective of the study is to determine whether residential relocation of the voucher recipients have landed them in neighborhoods that is racially and economically mixed. Therefore the primary census tract-level variables of interest are poverty status, proportion of minority (Non-Hispanic Blacks, Hispanics), and median household income. The residential relocation is also supposed increase employment prospects. Therefore, employment variables are also analyzed. These include adult employment rate (proportion of population 16 years and above who are employed) and also specific category of employment like employment rate among high-school dropouts (proportion of children 16-19 who are not in high school and not employed).

Third categories of variables that are analyzed are variables that indicate neighborhood distress (Kasardra, 1993). The rationale for analyzing neighborhood distress is that a successful residential relocation would relocate the voucher recipients to neighborhoods that are less distressed than their origin. The distress variables includes poverty status, and in addition includes the following: Proportion of female-headed households with children under 18, proportion of households receiving public assistance income, proportion of adult population 25 years and over with less than high school education, high school drop out rate (proportion of population 16 to19 that are not in high school and that don't have a high school diploma), proportion of high school dropout that are unemployed

Variables that help interpret the results in terms of housing market are also included in the analysis. For example, residential relocation could be hindered by high cost of rental housing in areas surrounding the city.

Quantitative comparisons: Objectives

Quantitative analysis, using weighted means of census tract characteristics is based on the sample of 387 complete pairs of addresses. Each of 387 voucher recipients was assigned an id, and census tract characteristics of the address were attached to the row of data for that id. Weighted means of relevant variables (like poverty rate, percentage minority) of origin addresses (n=387) and the destination addresses (n=387) are compared.

These means are compared to determine whether the move was a success. For example, if the average origin tract poverty rate is 25% and average destination tract poverty is 22%, it would constitute an improvement. The statistical significance of these differences is also tested. The statistical test chosen for this purpose is SPSS's paired sample t-test. The paired sample t-test is designed to test the significance of difference between two treatments. The two treatments, for the voucher recipients are:

- a. Neighborhood condition (a chosen census tract variable) of their origin address in 1999, and
- b. Neighborhood condition (a chosen census tract variable) of their destination address in 1999

The paired-sample t-test tests whether the average difference between the origin variables and the destination variables is zero. The test takes an average of all the differences

(n=387) between the origin and the destination variables for each case. If this mean of the differences is different from zero, then one can conclude that there is a significant difference between the two treatments (origin and destination).

The success of residential relocation will be explored, one variable at a time, based on the mean values for origin and destination tracts, and the significance of difference. For the primary variables, a move to a neighborhood with lower poverty rate, lower proportion of minorities, higher median income, and with difference significant at 95% confidence interval, constitutes success.

Qualitative comparisons and spatial analysis

A geographic analysis is very relevant to the study since the objective of the research is to assess dispersal and deconcentration, and the nature of data—addresses—also makes it a very relevant exercise. All the addresses were geocoded using ESRI Arc View Software in to a street level map. Tiger 2000 file, which has the street coverage for the whole of United States, and which is available free from Census Bureau, was used for this purpose.

Geocoding process in Arcview involves Batch Match where the software gives a score ranging from 75 to 100 for a perfect address match. It is usually the case that all the addresses do not match and therefore do not produce a dot in the map due to spelling errors and limitation of the reference street map. The final number of origin-destination

pairs matched was 350. The households that failed to yield address match on either the origin or the destination were excluded from spatial display and subsequent analysis.

GIS also enables overlays of different themes in the same map. Once the address points are geocoded and the points labeled origin and destination, these can form the frame of reference for other data that can be overlaid. The outputs maps of Oakland County, showing the distribution of vouchers with the distribution of other census tract level attributes like (poverty status, unemployment rate) would give a visual picture of location of vouchers relative to distribution of poverty and unemployment. Such analysis has been attempted before. Varady et al. (2000) analyzed dispersal of vouchers using similar method, and were able to show graphically the extent of dispersal.

Spatial distribution of vouchers in Oakland County: an early analysis

Figure 4 below shows the distribution of voucher recipients within the extent of the Oakland County. The Figure shows a heavy concentration of Section 8 Housing Vouchers within the confines of Pontiac. Figure 5 shows Pontiac detail, covering only the census tracts that fall within Pontiac.

Both these figures set the tone for the rest of the analysis in this paper: that the vouchers recipients are concentrated within the confines of Pontiac and there are very few vouchers recipients that have landed to other parts of Oakland County.

Figure 1: Voucher Locations in Oakland County

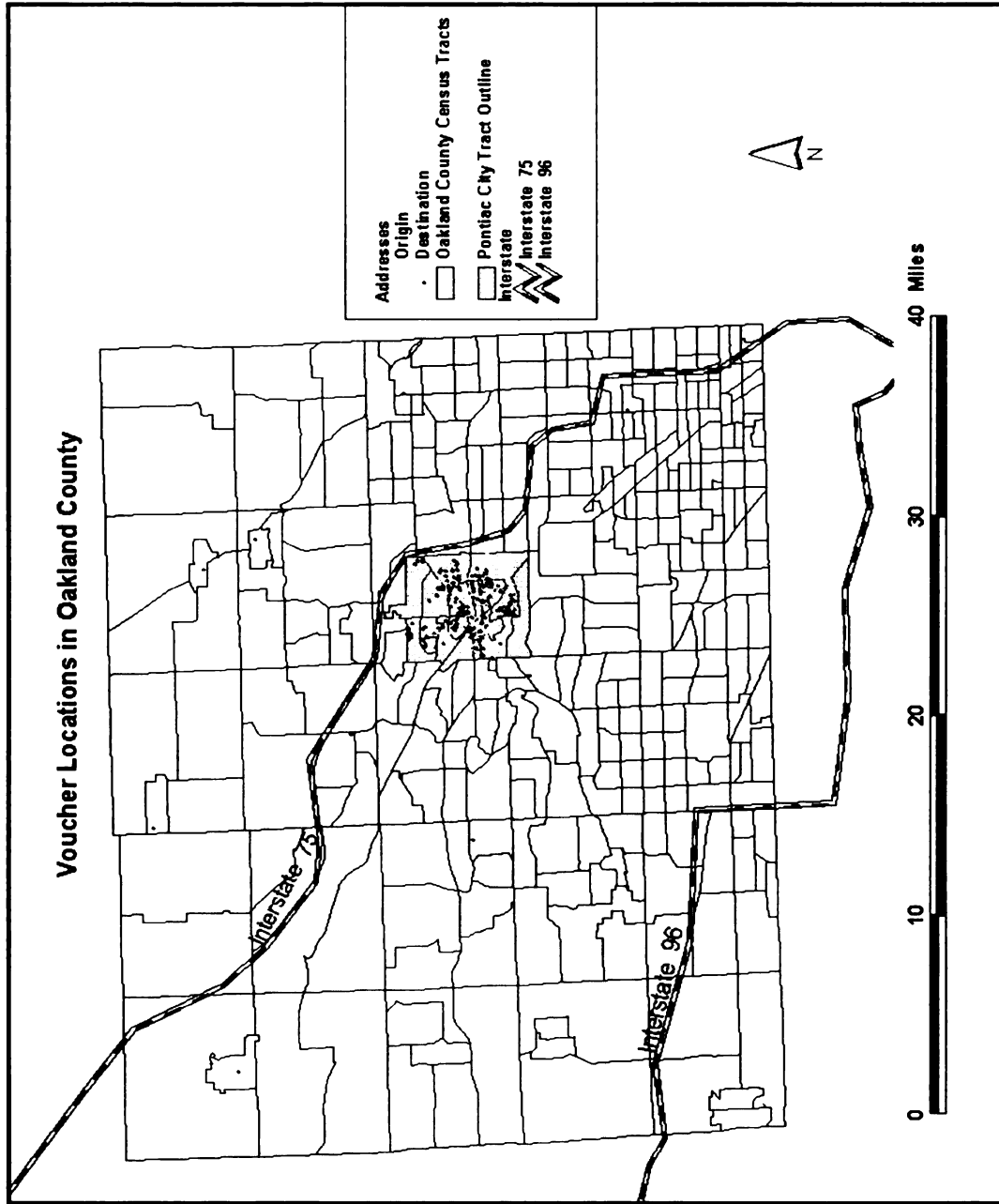
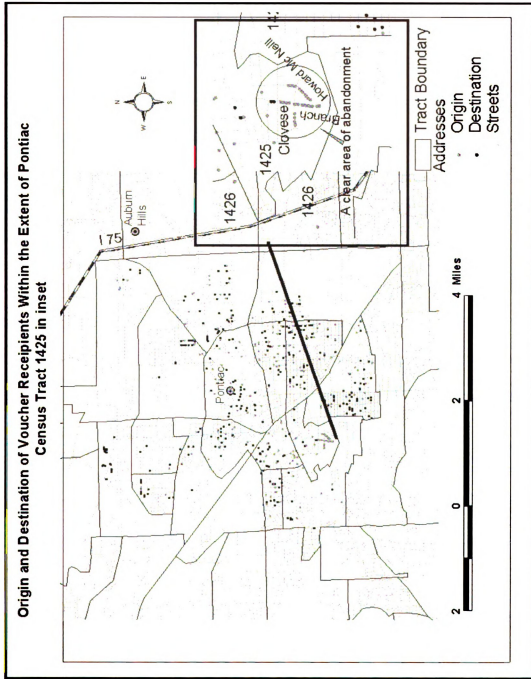


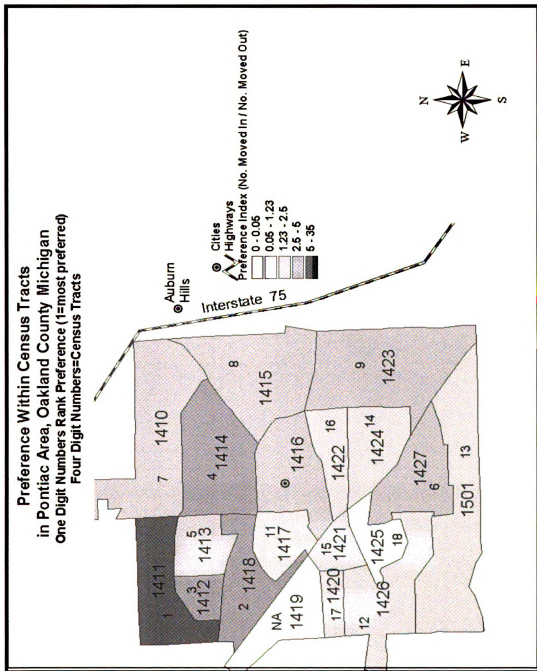
Figure 2: Origin and Destination Location of Voucher Recipients within the Extent of Pontiac



In both the maps (Figure 1 and 2), light dots show the pre-move addresses and the dark dots show the post-move addresses. It can be generally inferred from the distribution of the dots that pre-move and post move locations are more-or less within the Pontiac. There seems to be very few moves out of Pontiac to other parts of Oakland County. A quick look also confirms what was discussed earlier in terms of patterns of these dots. There is no discernible spatial pattern (grouping or clustering) for either the dark dots or the lighter dots, separating areas chosen from the areas rejected. Except for few instances like in census tract 1425 where a contiguous area is evacuated, the pattern is not clear. The origin and the destination points are more or less interspersed within the boundary of Pontiac, suggesting uniform spatial distribution. However, some tracts are more preferred than others as indicated by different frequencies of addresses for these tracts. A simple preference index—ratio for each Census Tract, of the number that moves in to the number that moves out calculated to rank the preference among the tracts. Figure 3 maps this preference for tracts within the city of Pontiac, giving an overview of preference within these areas of highest voucher concentration.

The Census Tract 1425 of the Oakland County is the only tract that resembles a spatial case of distinct rejection (see also Figure 2 inset). A very small number of voucher recipients have moved into this tract compared to those that have moved out. One probable reason for this could be that tract is the site of public housing establishment. The preference index for Census Tract 1425 is 0.05, and it is therefore is the least preferred tract. The most preferred Census Tract is 1411 with the preference index of 35.

Figure 3: Preference for Census Tracts within City of Pontiac



For each of the voucher recipient the distance between their origin and the destination addresses was calculated. This was done using the Arcview software's network analyst extension, which allows for accurate measurement of distance. The procedure calculates the distance between two given points using the street map as the reference. The distance calculated is the shortest route using the street network, from origin to destination, for each pair of address. Street distance was deemed more of an appropriate measure, since driving or walking distance is a more realistic reference in neighborhood interactions. The average distance moved by Pontiac voucher recipients was 2.53 miles.

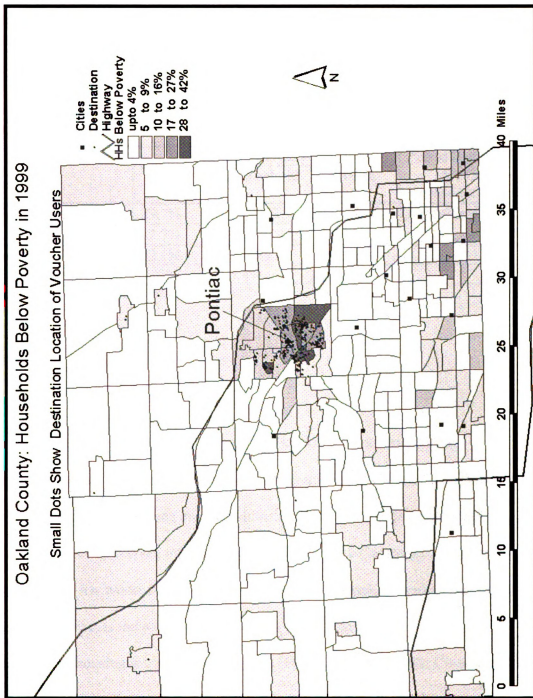
Analysis and Results

Poverty

Poverty deconcentration is an explicit goal of Section 8 Voucher programs. As mentioned in the Housing Act of 1974, Section 8 families are supposed to move from high-poverty areas to low-poverty areas.

In the study sample, the average tract that the voucher recipients left behind had a population poverty rate of 29.7 percent, and the ones that they moved to had 22.7 percent. Therefore, the families did manage to move to an area of lower poverty, and that indicates some success. However, the destination tract poverty level of 22.7 percent is still classified a 'poverty area' by census bureau standards, which defines poverty areas as those tracts having poverty rate up to 20 percent. The destination tracts would have been disqualified as destinations for the MTO participants, who were only allowed to move to 'low poverty' areas with poverty rate less than 10%. The destination tracts would also not be considered an 'opportunity area' by Baltimore Housing Authority Standards, for example, which considers opportunity areas as ones below the poverty level of 20 percent (See Swope, 2000). Compared to the Oakland County as a whole, which has a poverty level of 5.5 percent, the destination tracts, and Pontiac, which has a poverty rate of 20.9 percent, are clearly poor (See Table 2). Figure 4 below maps the poverty rate for the whole of Oakland County, and shows that the poorest neighborhoods are in and around Pontiac.

Figure 4: Percentage Households Below Poverty in Oakland County



Concentration of destination address dots in the same area illustrates the failure of dispersal into low-poverty areas, given the apparent opportunity to locate in low-poverty tracts outside Pontiac. The tracts where the voucher holders have located are also the poorest tracts in the whole of Oakland County.

Table 2: Poverty Rates in Origin and Destination Tracts, Pontiac and Oakland County

	Percentage Below Poverty			Paired Sample T-Test for Origin- Destination Pairs
	⁵ Population	Household	Families	
Origin Tracts	29.7%	28.32%	25.4%	Significant (p <0.01)
Destination Tracts	22.7%	21.6%	18.6%	
Pontiac	22.1%	20.9%	20.3%	
Oakland County	5.5%	5.4%	3.8%	

Source: Summary File 3 Tables. Census 2000

Race

Like poverty-deconcentration, another goal of Section 8 Vouchers is racial deconcentration, or more specifically, racial integration of the voucher recipients into neighborhoods that mixed race or even white dominated. The rationale for this, as mentioned earlier, is derived mainly from experiments like Gautreaux where racial integration that has worked in favor of the minority who made the move. The espoused benefit mechanism is the neighborhood effect—better role models.

Segregation in housing is a pervasive problem (Farley and Frey, 1994; Crowder, 2001) and Detroit area was the most segregated metropolis in 1990 among 47 metropolises with

⁵ Population for which poverty status was determined

a population of a million or more (Farley and Frey, 1994: 9). The results show that both the origin and the destination neighborhoods were still had a high percentage of Non-Hispanic Blacks. The average origin neighborhood had 67.3 percent population that was Non Hispanic Black and the same for the destination neighborhood had 54.4 percent Non-Hispanic Blacks (See Table 3). The difference between these means is significant at $p=0.01$ level. Therefore, it can be concluded that, although the destination neighborhood is still very segregated with 54.4 percent Black, the move does constitute improvement for individual voucher holders.

Table 3: Minority Percentage in Origin and Destination, Pontiac and Oakland County

	Percentage of Population				Paired Sample T-Test for Origin-Destination Pairs
	Non-Hispanic Blacks	Non-Hispanic Whites	Hispanic	Minority (Blacks and Hispanic)	
Origin Tracts	67.3%	7.5%	21.0%	88.3%	Significant: ($p < 0.01$)
Destination Tracts	54.3%	11.0%	29.7%	84%	
Pontiac	47.2%	34.6%	12.7%	59.9%	
Oakland County	9.9 %	81.4%	2.5%	12.4%	

The destination tract proportion of Hispanic has actually increased from 21 percent to 29.7 percent. The proportion of Whites has increased from 7.5 percent in the origin to 11 percent in the destination. Despite marginal, but statistically significant gains in terms of move to non-minority tracts, the 84 percent of population in average destination tracts are minority. Oakland County, as whole has only 9.9 percent Blacks and 12.4 percent minority. This is clear evidence that vouchers are concentrated on highly minority dominated areas, within the Oakland County.

Figure 5: Percentage of Households that are Minority, Oakland County

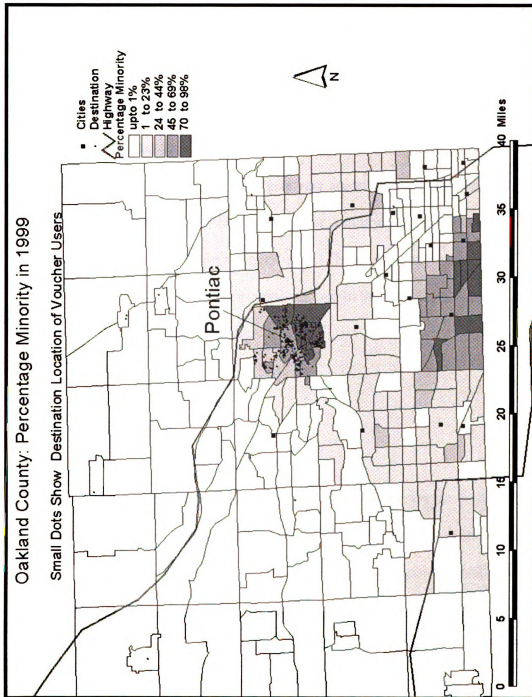


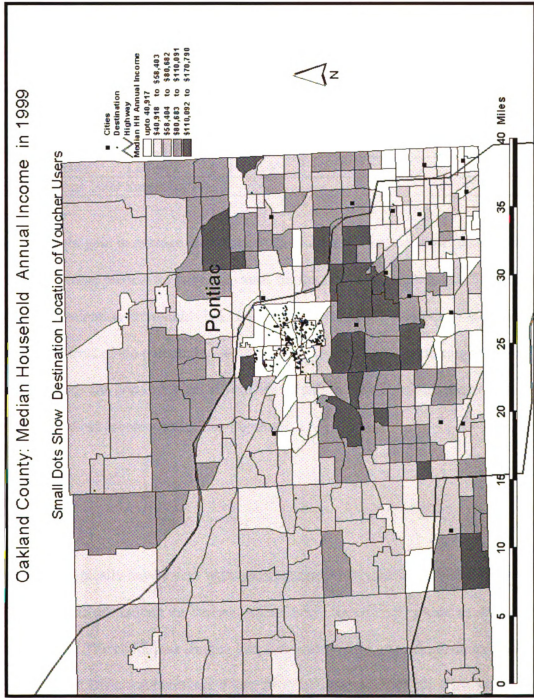
Figure 5 shows the proportion of minority household, confirming that the tracts where Section 8 vouchers households are concentrated are also the tracts that have the highest proportion of minority households.

As with poverty status, the desired threshold for racial composition also varies according to the mobility program. In Gautreaux program, the implementers had a stringent threshold: they did not send the participating tenants to areas with minority rate exceeding 7% (Rosenbaum, 1995:257). Targets vary according to region. For instance, for the Baltimore Housing Authority discussed earlier, a minority rate of less than 20% was sufficient and constituted the ‘opportunity’ area. There seems to be ample “opportunity” areas, with low minority proportions, within the Oakland County where the voucher recipients can potentially relocate.

Income

Move to mixed-income neighborhood is another intended outcome for the Section 8 Vouchers. Through provision of rent subsidy that supplement the rent amount after the tenant contributes 30% of her household income, the tenants are expected to afford better housing in a more expensive, but decent neighborhoods. If this aspect of Section 8 Instrument were working, one would expect that the voucher recipients move to higher-income tracts. Median Households Income is taken as a measure of neighborhood wealth in this analysis. Table 4 shows Median Income (for Households, Families, and the Population) for the Average Destination Tracts, Average Origin Tracts and for the whole

Figure 6: Oakland County: Median Household Incomes



of Oakland County and the Pontiac, along with results of Paired Sample Test for the Origin-Destination Pairs.

Table 4: Median Incomes, Pontiac and Oakland County

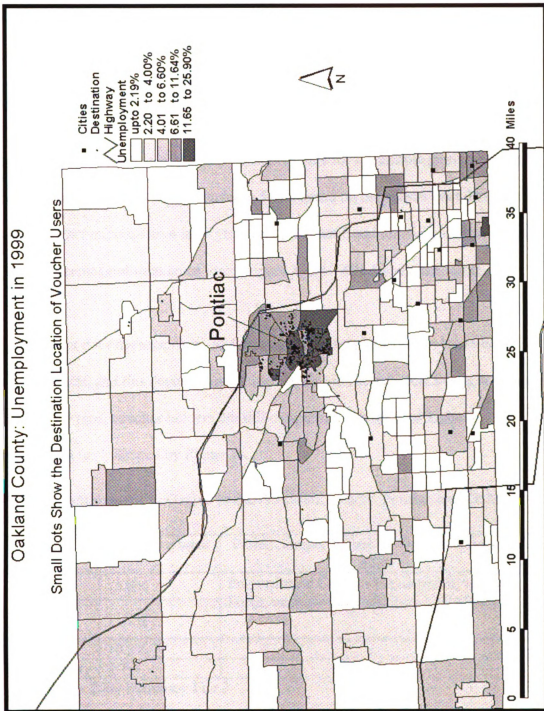
	Median Income		Paired Sample T-Test for Origin-Destination Pairs
	Households	Families	
Origin Tracts	27,239	31,077	Median Household Income, Significant: (p <0.01)
Destination Tracts	31,159	36,549	
Pontiac	31,207	36,391	
Oakland County	61,907	75,540	
Source: Census 2000 Summary File 3			

There is a slight gain in average median household income from origin to destination tracts. The average median household income for the origin households is \$27,239 and that for the destination households is \$31,159. The difference is statistically significant. However, in terms of the potential to relocate in higher-income areas throughout the Oakland County, the concentration of vouchers is still in areas that have the lowest Median Household Income range (See Figure 6).

Employment

Central cities typically have a very high unemployment rate (Orefield, 2000). High-unemployment is one among the various attributes of ‘distress’ often used to characterize inner city areas. The conditions leading to a systematic unemployment in the central cities are varied. Disinvestments and White flight (relocation of middle class whites to suburbs and relocation of business to follow them) are some of the conditions cited as being responsible (Orefield, 2000)

Figure 7: Unemployment in Oakland County



Section 8 vouchers, as exemplified by the Gautreaux experiment, would be performing well if they are moving the low-income tenants to areas where there are jobs.

It is debated whether the observed gain in employment of participants in a successful housing mobility program is due to increased availability of jobs in the suburbs, or whether it is simply due to increased motivation (Rosenbaum, 1995, Turner, 1998). A simple assessment of job availability is attempted here for the sample participants. A measure of unemployment in civilian labor force, based on the census tract data is attempted. Exact measure used is 16 years and older male and female in civilian labor force as a percentage of total labor force. Figure 7 and Table 5 show the result.

Unemployment does decrease from 15.6 percent in the origin tracts to 11.2 in the destination tracts, and this decrease is significant. This is encouraging, but as in the case of poverty and race, voucher holders are still concentrated in areas of highest unemployment (as indicated by Figure 7).

Table 5: Unemployment in Origin and Destination Tracts, Pontiac and Oakland County

	Unemployment	Paired Sample T-Test for Origin-Destination Pairs
Origin Tracts	15.6%	Proportion of Civilian Population in Labor Force, unemployed, Significant: (p <0.01)
Destination Tracts	11.2%	
Pontiac	10.3%	
Oakland County	3.7%	

Source: Census 2000 Summary File 3

It confirms the earlier patterns of concentration in distressed tracts. The areas where vouchers are located are also the areas with highest unemployment in the whole of Oakland County.

Social context indicators

Poverty, race, income and employment are census tract characteristics that a Section 8 Program can constantly monitor, in order to achieve better success. As is evident in the above discussions, the distribution of vouchers in Oakland County is not optimal in these parameters. There are additional, conventionally accepted measures of neighborhood distress, which further supplements the analysis. Kasardra (1993) and Hartung and Henig (1997) use the following social context indicators—poverty, joblessness, proportion of female-headed households, proportion of population receiving public assistance and high school dropout rate.

Among these, female-headed households, households on public assistance, and proportion of population 25 years or over who are less than high school graduate is analyzed in the following section, to supplement earlier analyses of poverty. Figures 8 through the 10 show the distribution of these variables relative to destination locations of the vouchers, Table 6 summarizes the results.

Table 6: Indicators of Neighborhood Distress and Performance of Origin and Destination Tracts

	High School Dropout Rate	Unemployment among High School Dropouts	Proportion of Female-Headed Households	Proportion of Population Receiving Public Assistance	Proportion of Population 25 years and over with less than high school education
Origin Tracts	18.1%	23.6%	20.7%	8.6%	34.06%
Destination Tracts	19.1%	9.9%	23.6%	10.1%	17.11%
Paired Sample T-Test for Origin-Destination Pairs	Not Significant (p > 0.05)	Significant: (p < 0.01)	Significant: (p < 0.01)	Significant: (p < 0.01)	Significant: (p < 0.01)
Pontiac	19.8%	11.6%	14.8%	31.1	7.6
Oakland County	5.5%	18.4%	4.9%	10.7	1.8

Source: Census 2000 Summary File 3

There are mixed results in terms of differences between the origin and destination tracts characteristics of these indicators of distress. The only difference not significant and $p=0.05$ is high-school drop out rate. There is not much difference in high-school drop out rate between the old neighborhoods and the new neighborhoods.

However, adult educational attainment—adults over 25 years with less than high school education—has increased after the move to new neighborhoods. The gain from origin to destination neighborhood is 34.1 percent to 17 percent. New neighborhoods therefore have more educated individuals, therefore are better, on average, in terms of potential for offering ‘role models’. Another variable that improved for the destination tracts is unemployment among high school dropouts. In the origin tracts 23.6 percent of the high-school dropouts were unemployed, in the new neighborhood this dropped to 10 percent.

However, among the distress indicators, single parenthood and dependence on public assistance actually increased in the new neighborhoods. The origin neighborhood had 20.7 percent of households that were female-headed with children under 18. This increased to 23.6 percent in the destination neighborhoods and this difference was statistically significant. Given that single parent females form the largest majority of Section 8 voucher recipients nationwide (HUD 2000), this result is interesting, and could lead to further revelations upon more analysis. Similarly, proportion of population dependent on income from public assistance also increased from 8.6 percent to 10.1 percent. The proportion is still less than the average for the city of Pontiac (31.1 percent), therefore indicating by this measure, both the origin and the destination neighborhoods are better than Pontiac.

The results of comparison of distress indicators of pre-move and post-move tracts are therefore mixed. While there were encouraging gains in terms of adult educational attainment and unemployment among high school dropouts, there were no gains in the measure of proportion of female-headed households and dependence on public assistance. Whatever the incremental gains or loss as a result of the move, relative to Oakland County as a whole, vouchers are still concentrated on distressed tracts for most indicators of distress. The following Figures (8 through 10) show the distribution of three of the distressed indicators, it is clear that in all these measures the location of destination vouchers falls in the highest range of distress.

Figure 8: Proportion of Households that are Female-Headed with Children Under the Age of 18

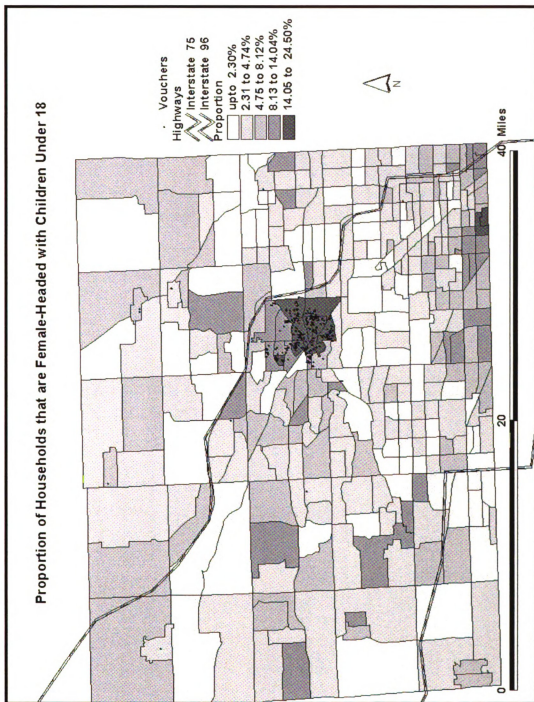


Figure 9: Proportion of Households Receiving Income from Public Assistance

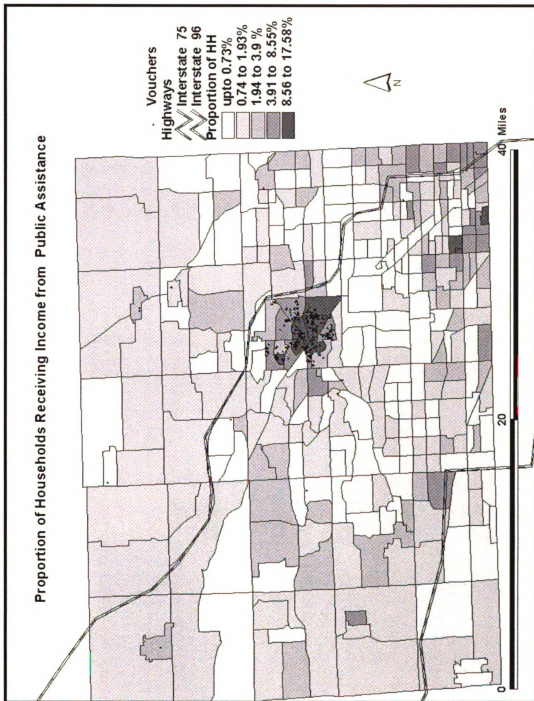
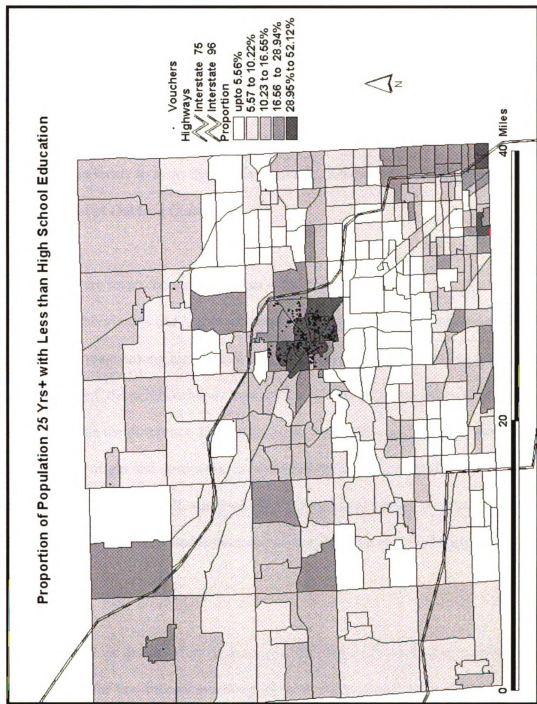


Figure 10: Proportion of Population 25 Yrs and over with Less than High School Education



Summary of results

The above analysis clearly shows that the vouchers in Pontiac, Michigan are still concentrated in poverty tracts (>20% poverty rate), tracts with high proportion of non-Hispanic blacks (54.3%), and tracts with lowest range of median household income in Oakland County. The spatial distribution associated with each of the variables analyzed clearly shows that dispersal, as a strategy is not working, especially given the availability of opportunity to locate to areas that are low poverty, low minority and high income, within the extent of Oakland County.

However, there are some encouraging gains at individual levels. For example, the destination neighborhoods had higher proportion of high school educated adults, and lower unemployment among high school dropouts. Most importantly, for each individual family that moved, the neighborhoods they moved to were different from the ones they left, however little the difference. Exception to this was high school dropout rate, where the difference in origin and destination neighborhoods for the individual family was not statistically significant. Overall, vouchers have concentrated, more or less in distressed tracts, within highest poverty and highest minority concentration areas within Oakland County

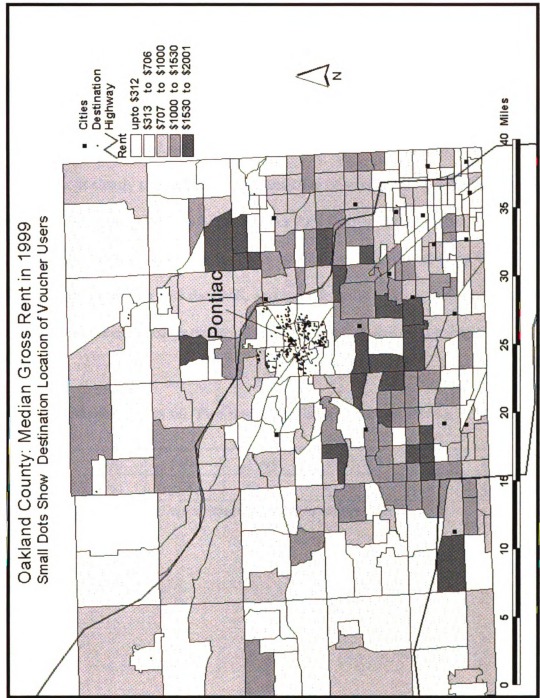
MTO demonstrations discussed above have provided the evidence that relocation counseling helps the low-income tenants to disperse more. There was a significant difference between the performance of Section 8 group and the MTO group and their ability to relocate to suburbs. Katz et al. (2001) found the even though the both groups

came from a similar background, 31.3 percent, among the MTO group relocated to suburbs, as opposed to only 1.9 percent for the regular Section 8 comparison. One of the differences in the treatment was that MTO group received housing relocation counseling that included items like landlord outreach. They were informed about the opportunities and their choices more so than the Section 8 group. The Gautreaux program also had relocation counseling and therefore had a good success rate for relocation to suburbs (Rosenbaum, 1995). This aspect seems to suggest that constraint to relocation is only the lack of information, counseling, or logistic help (car for apartment hunting, for example).

Another obvious constraint is the cost of rental housing in private market. Pendall (2000) contends that it should be no surprise that vouchers are concentrated in the distressed tracts because the rental housing is also concentrated there. Decent housing in an area out of the present cluster of Section 8 vouchers, which are mostly within the Pontiac boundary, may cost more than the subsidy.

Section 8 vouchers do pay part of the rent but there is a ceiling to it—The Fair Market Rent value, anything above which the voucher recipients have to pay out of their own pocket. In a tight housing market, this FMR set by the HUD, maybe much lower than the market rate for decent housing in that area. Table 7 shows the FMR for Detroit MPSA, inclusive of Oakland County, for the period 1995-2000. The natural-break distribution of Gross Median Rent for a two-bedroom apartment in the Oakland County is displayed in Figure 11.

Figure 11: Median Gross Rent in Oakland County, Michigan



The distribution clearly shows that Gross Median Rent varies throughout the county and also has a special pattern. Median Gross Rents for census tracts outside the areas of vouchers concentration is distinctly higher. Most of the voucher locations fall within areas with a median gross rent under 706 dollars (first two legends in the map legend).

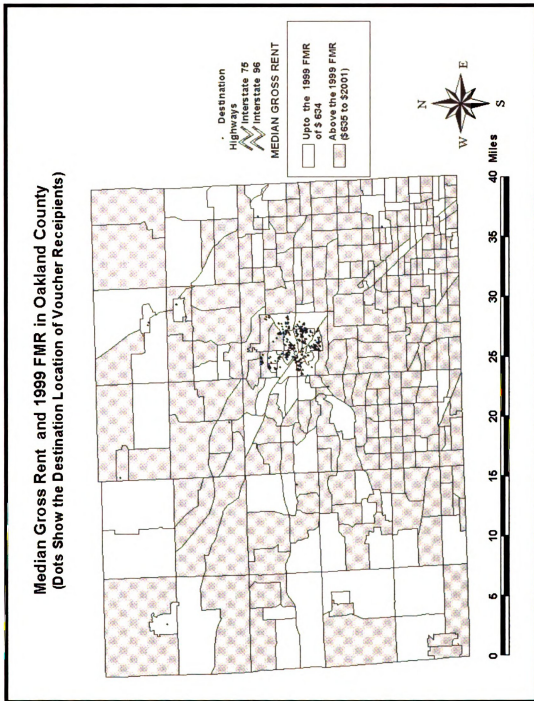
Table 7 shows the trend in FMR for two-bedroom unit in Detroit MPSA. Further analysis of FMR as a constraint can be attempted based on 1999 FMR— Figure 12 displays the resulting map. It clearly shows that the concentration of voucher recipients falls squarely in the un-shaded areas, where the Median Gross Rent is up to the Fair Market Rent of 634 dollars. The shaded area (almost all the tracts outside the Pontiac area) has a Gross Median Rent that is higher than the FMR, and has very little voucher recipients that have relocated there, as evidenced by the low density of dots that area of the map.

Table 7 Fair Market Rents for Two Bedroom Units in Detroit PMSA

Year	2000	1999	1998	1997	1996	1995
FMR_2BD	\$650	\$634	\$618	\$567	\$559	\$550

Source: HUD Datasets (<http://www.huduser.org/datasets/fmr.html>)

Figure 12: Median Gross Rent Up to and Above the 1999 FMR in Oakland County



This analysis, although simple, does indicate that housing costs may be the constraint to achieving the desired dispersal. If this is the case for Pontiac, Michigan, relocation success is more a reflection of cost of housing in the private rental market rather than the quality of information and counseling the low-income tenants get. This needs further investigation.

Conclusion

The analysis of relocation success of Section 8 vouchers recipients in Pontiac, based on census tract characteristics of tenants, seems to indicate that economic and racial integration has not resulted to the desired extent, nor is spatial dispersal evident. Average distance moved by each voucher holder was only 2.53 miles.

Firstly, 15.7 percent of the households (from a total of 459) moved within the same tract. For the rest who moved at least to a different census tract, there are marginal gains towards racial and economic integration, and these gains are statistically significant. The program as a whole though, still seems to concentrate vouchers in high-minority areas (84 percent minority) and in poverty areas (greater than 20 percent of households below poverty line). Additional analysis of widely used measures of neighborhood distress also indicated that the cluster of voucher households fall squarely on the most distressed tracts for the most indicators of distress— proportion of adults without high school diploma, high school drop out rate, and proportion of female-headed households.

There could be several reasons for this lack of success in spatial dispersal and racial and economic integration to the desired extent. One of the most straightforward explanations is that vouchers concentrate in distressed tracts because affordable rental housing is also concentrated in these tracts (Pendall, 2000). A simple spatial analysis of location of the vouchers relative to FMR and Gross Median Rent for Oakland County demonstrated this constraint, to some extent, for the Oakland County.

Personal transportation could be another major constraint. One can not expect the inner city poor without a car to move to suburbs when it is logical for them to remain in areas with familiar bus lines (Varady and Walker, 2000). It could also be that minorities (majority of voucher recipients) feel more comfortable living in areas with a decent proportion of minority, even when given the choice to move to mixed, or white-dominated areas (Farley and Frey, 1994; Hartung and Henig, 1997). Section 8 tenants also face actual discrimination from landlords who do not wish to take the voucher-holders because of the associated stigma with low-income tenants (Pendall, 2000; Hartung and Henig, 1997) and this might have limited moves to the suburban developments.

There is evidence that regular Section 8 Vouchers can be made more efficient as a tool for dispersal, if supplemented with relocation counseling and landlord outreach. MTO demonstration program, discussed earlier indicate that these improve success rate. Studies on success of Chicago's Gautreaux program also point to importance of counseling and landlord outreach (Rosenbaum 1995). There has also been suggestion to improve inter-jurisdictional cooperation in the administration of Section 8 program in order to achieve better success (Katz and Turner, 2001).

It is evident from this research that a voucher-based strategy for dispersing housing opportunity for the poor has its limitations. Except for the MTO demonstration program, mobility is not imposed—regular Section 8 voucher holders also have the choice not to

move. There are other strategies that aim for betterment of housing opportunity through dispersal. HUD's scattered site public housing is one such policy. The policy originated from the Gautreaux ruling in Chicago that mandated that all new public housing be built at scattered sites, and not concentrates new development in inner city locations.

Enforcement of fair share housing is another such strategy. Fair share housing is based on the notion that jurisdictions should establish specific criteria for including their fair share affordable housing in any new development, not only public housing developments.

States and jurisdictions that have articulated such policy mandate that any new housing development, wherever they are developed, should produce a fixed proportion of units that are affordable for the low-income residents. In light of the fact that vouchers do not seem to have achieved the desired dispersal in Pontiac, a holistic approach might include a mix of all strategies, including fair share and scattered site public housing.

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