Section 8 Households and the Relationship to

Property Crime in Charlotte, NC

for

Charlotte Housing Authority

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BACKGROUND AND CONTEXT

Providing expanded opportunities for affordable housing is one of the critical

goals of public housing authorities and not-for-profit organizations working with low-

income community residents. One important strategy to expand affordable housing

focuses on enhancing the availability of affordable housing in existing residential

communities. This approach can encompass the construction of new affordable housing

units, growing homeownership opportunities, and offering rental assistance. All of these

strategies permit households, who have historically been concentrated in high poverty

neighborhoods, the chance to move to lower-poverty neighborhoods, where the quality of

life is higher and opportunities to escape poverty are greater. The Section 8 voucher

program is one of these programs. It provides qualified individuals and families with a

housing assistance voucher that can be used to assist low-income residents to rent single-

family or multi-family housing units throughout the community.

But often, existing neighborhood residents raise concerns about the negative

impacts of some of these housing assistance programs. In particular, the Section 8

voucher program is claimed to result in significant concentrations of low-income

households in individual neighborhoods. In turn, the perception exists that as the number

of assisted affordable housing units increases in a neighborhood, there are commensurate

detrimental effects on the community. Underlying these beliefs is a notion that low-

income residents require additional services that exceed the existing resources already

allocated to the neighborhood. One critical impact, often cited by critics, is the need for

an increased police presence to deal with crime that presumably follows low-income

residents into a community. The simplified logic is that the more Section 8 residents in a neighborhood, the more criminal activity.

Reality is, however, far more complex. As a neighborhood experiences residential household change, marked by the in-movement of low-income households, the challenge is predicting what will take place in the community. There are two salient theories that postulate what can take place. Both theories assume that the residents moving into an existing neighborhood are coming from high poverty neighborhoods and have been exposed to higher than average rates of crime.

The social disorganization theory posits that the infusion of new residents into the neighborhood will disrupt the existing social organization of the new neighborhood. What follows, is that this process will eventually result in higher rates of crime committed by the new residents or outsiders who perceive increased vulnerability within the neighborhood.

The neighborhood effect theory offers that the existing neighborhoods characteristics will influence the new residents. Thus, the new community, with stable social conditions and neighborhoods with higher income households will exert a positive influence over new residents moving into the neighborhood. In turn, the new residents will respond to the positive characteristics of the neighborhood with positive behavior changes.

RESEARCH FRAMEWORK

This study was designed to assess the relationship between neighborhood crime characteristics and the distribution of Section 8 households in the City of Charlotte.

Rather than attempt to examine all criminal activity, the study is focused on property offenses. The choice of property crime is based upon public commentary and discourse linking declining property values and visual decline to Section 8 properties, and the connection of these externalities to property crime. Similarly, earlier research found the strongest patterns of linkage in the category of criminal activity. The term property crime is interpreted to mean burglary, larceny, vandalism, and trespass.

LITERATURE REVIEW

The research framework that most closely links crime and neighborhood change is the social disorganization theory. This theory argues that as a neighborhood is transitioning in terms of population and demographics, this change disrupts the social organization of the neighborhood (Shaw and McKay, 1969). This disruption can be attributed to many real and perceived issues. For example, as current residents leave the neighborhood, the remaining residents may have prejudicial feelings toward new residents, especially if the in-movers have different ethnic/racial or income characteristics. These feelings do not provide a welcoming attitude to new residents and prevent the everyday communication that exists between neighbors. By reducing the communication across the neighborhoods, a disruption of the typical social organization in the neighborhood occurs. Subsequently, new residents are not able to assimilate to the neighborhood environment. This can be especially difficult for the young people. If youth moving into the new community are not aware of conventional behaviors and don't follow the accepted behavior, this can lead to actual and perceived changes in crime.

Empirical application of the disorganization theory has, however, produced mixed success (Heitgerd et al, 1987; Sampson et al, 1989).

 Some empirical research using the social disorganization theory has targeted higher income households moving into lower income neighborhoods. The results from these studies indicate that the higher income residents experience more crime because they have disrupted the social organization of the neighborhood and/or have attracted criminal behavior (McDonald, 1986; Wilsem et al, 2006).

Other researchers examining this issue have focused on the relationship between proximity to public housing and crime rates. These have also offered conflicting results. A study in Cleveland, Ohio, suggests that neighborhood proximity to public housing does not exhibit a higher rate of crime, when socio-economic variables have been controlled (Roncek et al., 1981). In contrast, research carried out in Atlanta indicates that the intersection of race, crime, and public housing have adverse impacts on neighborhoods adjacent to public housing sites. Data from this study found that neighborhoods with large proportions of African Americans adjacent to public housing have higher rates of crime than paired African American neighborhoods not proximate to public housing, while controlling for other socio-economic factors (McNulty and Holloway, 2000). Finally, research from Yonkers, New York, showed that scattered site public housing had no significant financial nor non-financial (including crime) effects on the neighborhoods in which they were located (Briggs et al., 1999).

One recent research focused on the neighborhood impacts of low-income Section 8 voucher holders moving into higher income neighborhoods. Using data from the Moving to Opportunity (MTO) program, an initiative to improve the lives of families

living in public housing located in high poverty neighborhoods, researchers examined changes that occurred within MTO families related to employment, educational attainment, and crime. The study offered particular insights into the impacts that juveniles had on their new neighborhoods, with specific examinations of criminal activity by this population. The study findings varied between neighborhoods receiving MTO households. But, overall, violent crimes committed by both male and female youth decreased after moving to higher income neighborhoods. However, property crimes committed by male youth increased after moving to the new community. Based on their data, the researchers suggested that male youth had more difficulty assimilating to their new community, and in that context, the new neighborhoods offered more opportunities to commit property crimes (Kling et al, 2005).

RESEARCH FRAMEWORK

While a full review of the empirical literature examining the relationship between the Section 8 voucher program and neighborhood crime is inconclusive, the strongest evidence of a linkage can be shown in the area of property crime. Thus, this research report has focused on this category of criminal activity. This research question can be explored at two scales: the neighborhood level and the household level. By examining the data at the neighborhood level, researchers are able to compile more information to control for the variability of each neighborhood. Moreover, socio-economic characteristics and the built environment can be incorporated into the model to control for their contribution to explaining the difference in crime rates across neighborhoods.

However, examining crime data at the neighborhood level presents a research challenge. The population of any community is unlikely homogenous. But, using the neighborhood scale, the actions of a few residents may be generalized to all the residents of that neighborhood. Thus, the alternative household level scale was selected for the analysis. Using this scale, there is more confidence in the data and research findings. Household level data looks at point location of households and examines the data within a spatial proximity. The limitations of this method are that the amount of data at this level is restricted because of confidentiality reasons and capturing certain socio-economic characteristics is still challenging.

DATA

The data used in the research analyses were derived from local government data sources and the "2006 Charlotte Neighborhood Quality of Life Report". This study is published by the City of Charlotte, with the support of seven city and county agencies and departments. The Quality of Life analysis provided 173 neighborhood statistical areas (NSA) for Charlotte and 23 geographically referenced socio-economic, physical, and crime variables. For this research, the NSA geography is a proxy for neighborhood boundaries (Figure 1). The Charlotte Housing Authority provided the Section 8 households information for 2005, 2006, and 2007. With these two data sets, the percentage of Section 8 households for each neighborhood in 2005 and the percentage change in Section 8 housing between 2005 and 2007 were derived. Figures 2 and 3 display these data.

Figure 1
Neighborhood Statistical Areas (NSA)

Legend
— Major Roads
▪▪ City Limits
░ NSA Boundaries
▓ Areas not Included in Analysis
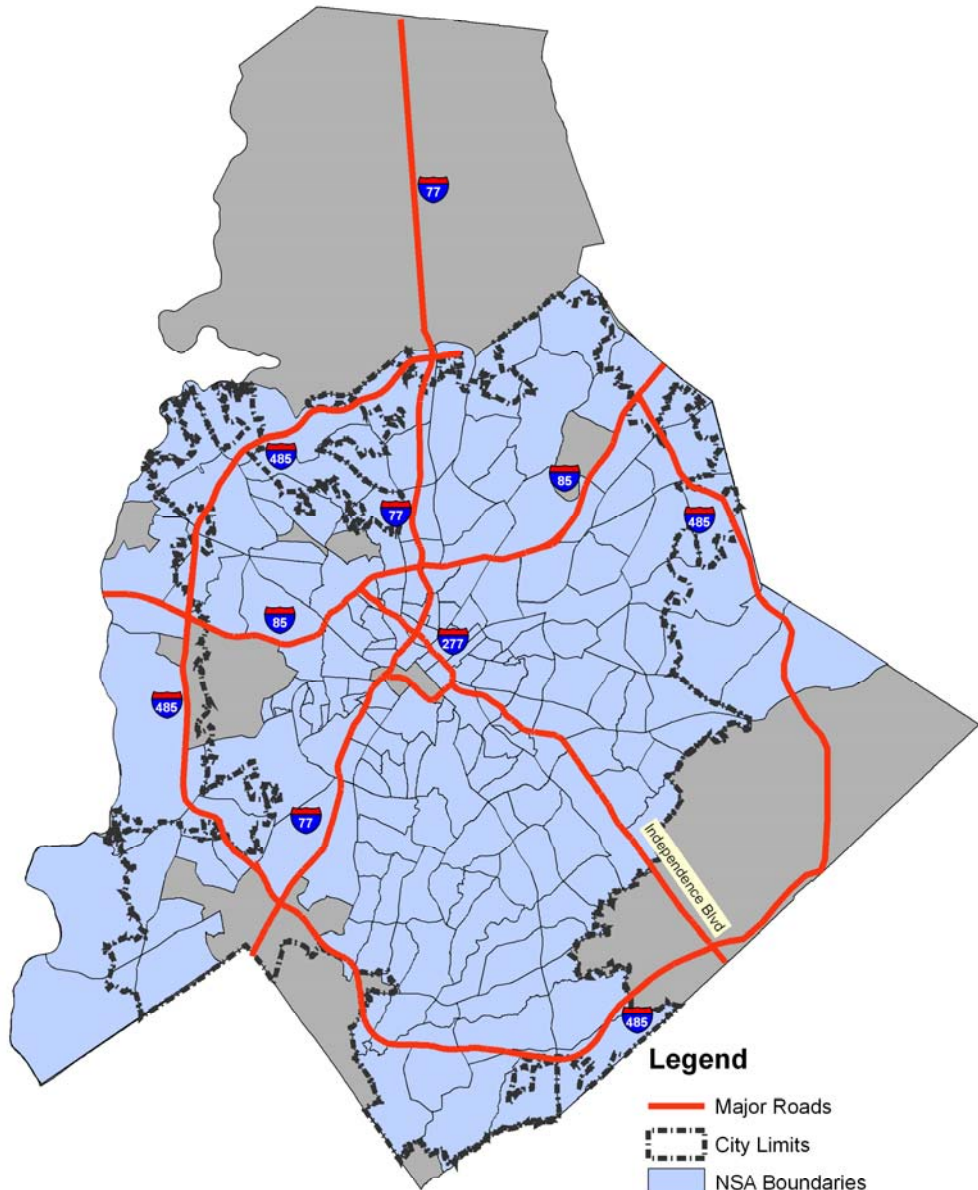
0   2.5   5   10 Miles

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Figure 2
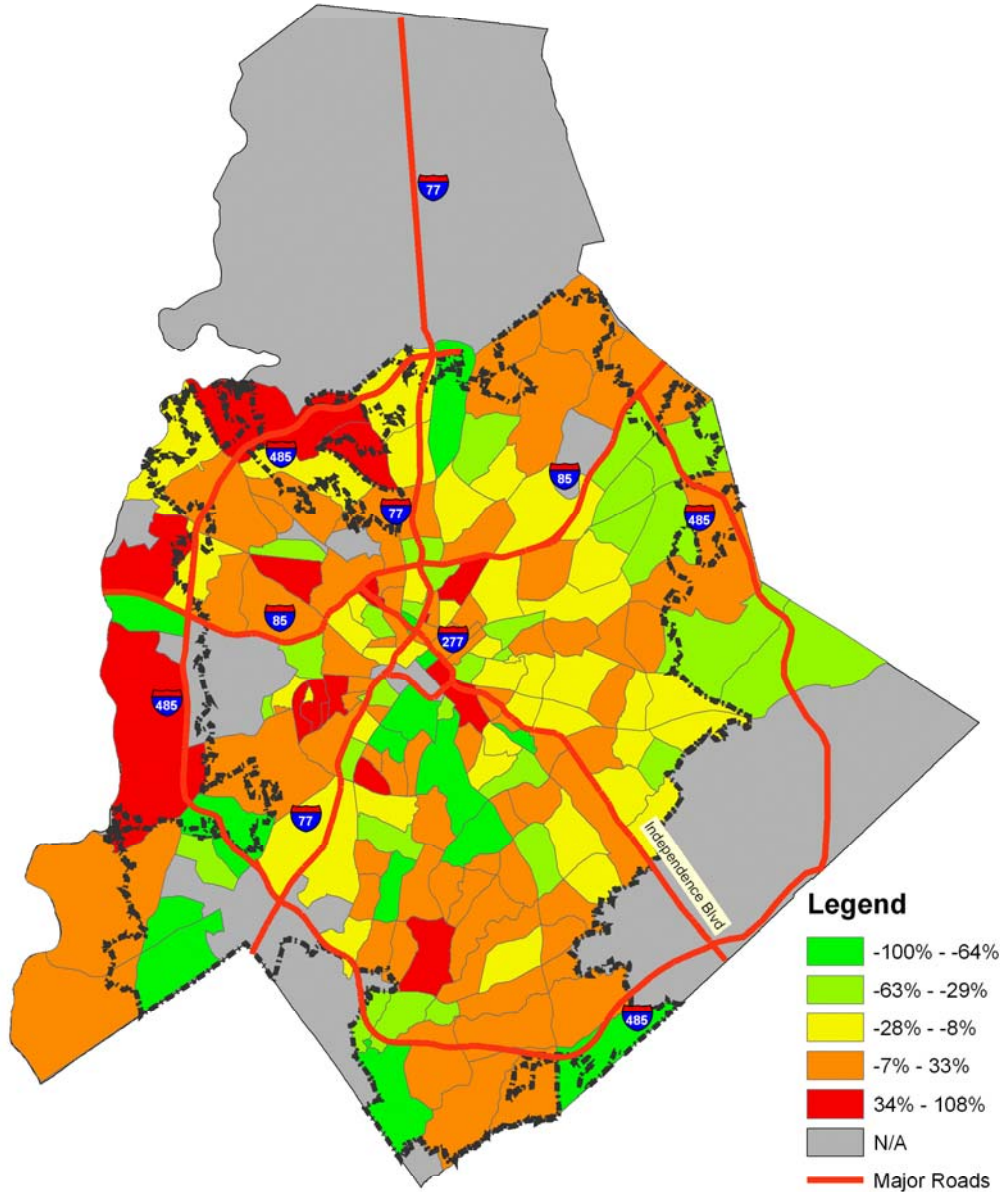# Percent of Section 8 Households
2005
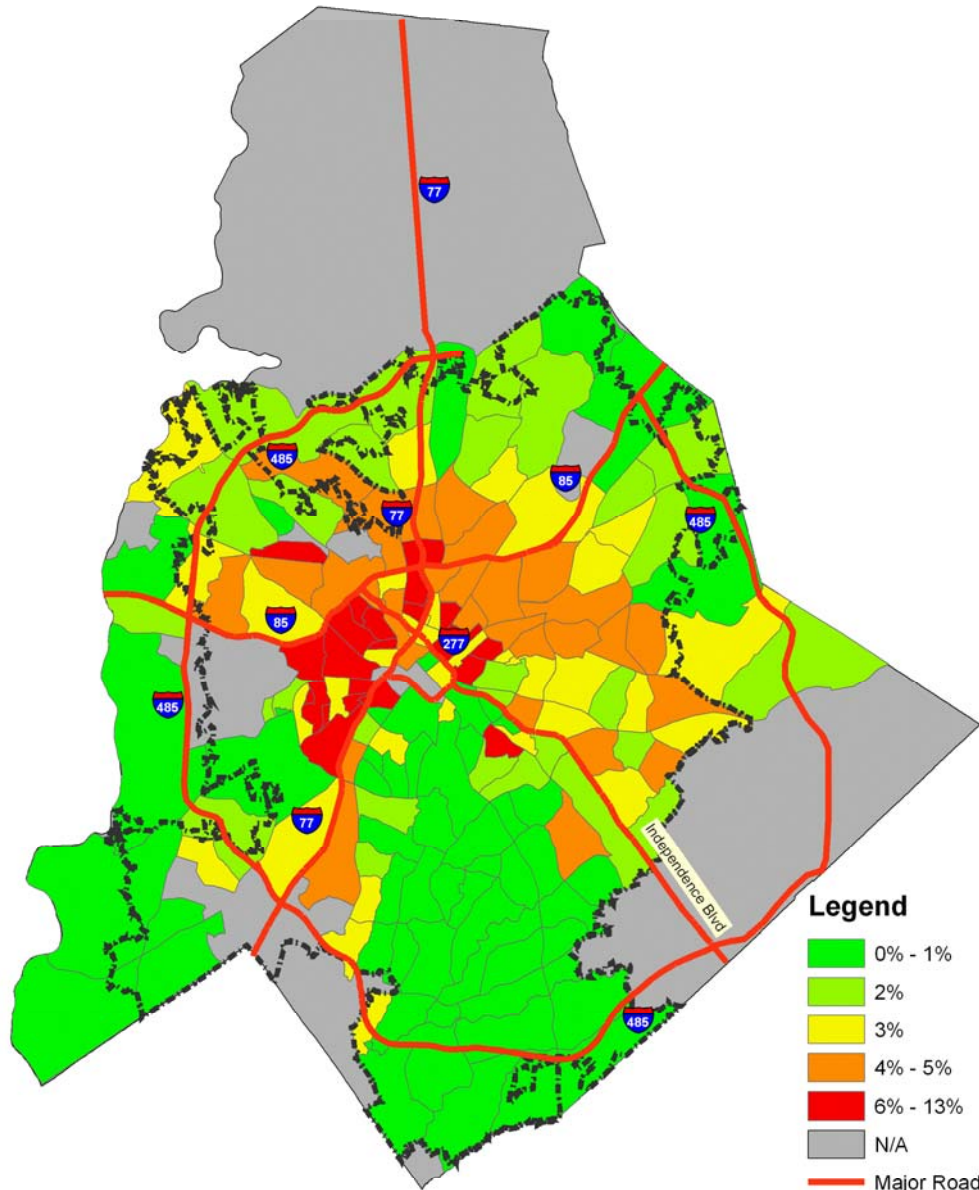
Legend

- 0% - 1%
- 2%
- 3%
- 4% - 5%
- 6% - 13%
- N/A
- Major Roads
- City Limits

0   2.5   5   10 Miles

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Source: Charlotte Housing Authority

Figure 3
Change in Section 8 Households
Between 2005 and 2007

Legend

- -100% - -64%
- -63% - -29%
- -28% - -8%
- -7% - 33%
- 34% - 108%
- N/A
- Major Roads
- City Limits

0   2.5   5   10 Miles

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Source: Charlotte Housing Authority

The Charlotte-Mecklenburg Police Department (CMPD) provided the raw data to calculate the property crime rate and the property crime rate change. These variables were based on CMPD records from July 2004 to June 2005 and July 2006 to June 2007 to come up with the property rate change. Figure 4 presents the property crime rate in 2005, while Figure 5 shows the property rate change. The types of property crimes included burglary, larceny, vandalism, and trespass. Property characteristics were based upon the 2005 parcel database from the Mecklenburg County Property Tax records. These were the bases for the calculated percentage of commercial property in each NSA.

RESEARCH HYPOTHESES

As a starting point for the study, three fundamental hypotheses regarding the relationship between Section 8 households in Charlotte and property crime were developed. These hypotheses were based upon widely held and discussed public assumptions regarding the presence of low-income residents in higher income neighborhoods, as well as, the findings of previous empirical literature presented earlier in this report.

Hypothesis – Model #1

Hypothesis 1 postulated that four predictor variables would significantly explain the rate of property crime in a neighborhood. The data used were from 2005. The four variables were the percent of Section 8 households for all housing types, the percent of persons receiving food stamps, the percent of developed commercial property, and the juvenile arrest rate. The direction of the linkage is positive. That is to say, as each variable increased, the property crime rate would also increase. This hypothesis was

Figure 4
Property Crime Rate
2005

Legend

- 1% - 6%
- 7% - 10%
- 11% - 17%
- 18% - 34%
- 35% - 78%
- N/A
- Major Roads
- City Limits
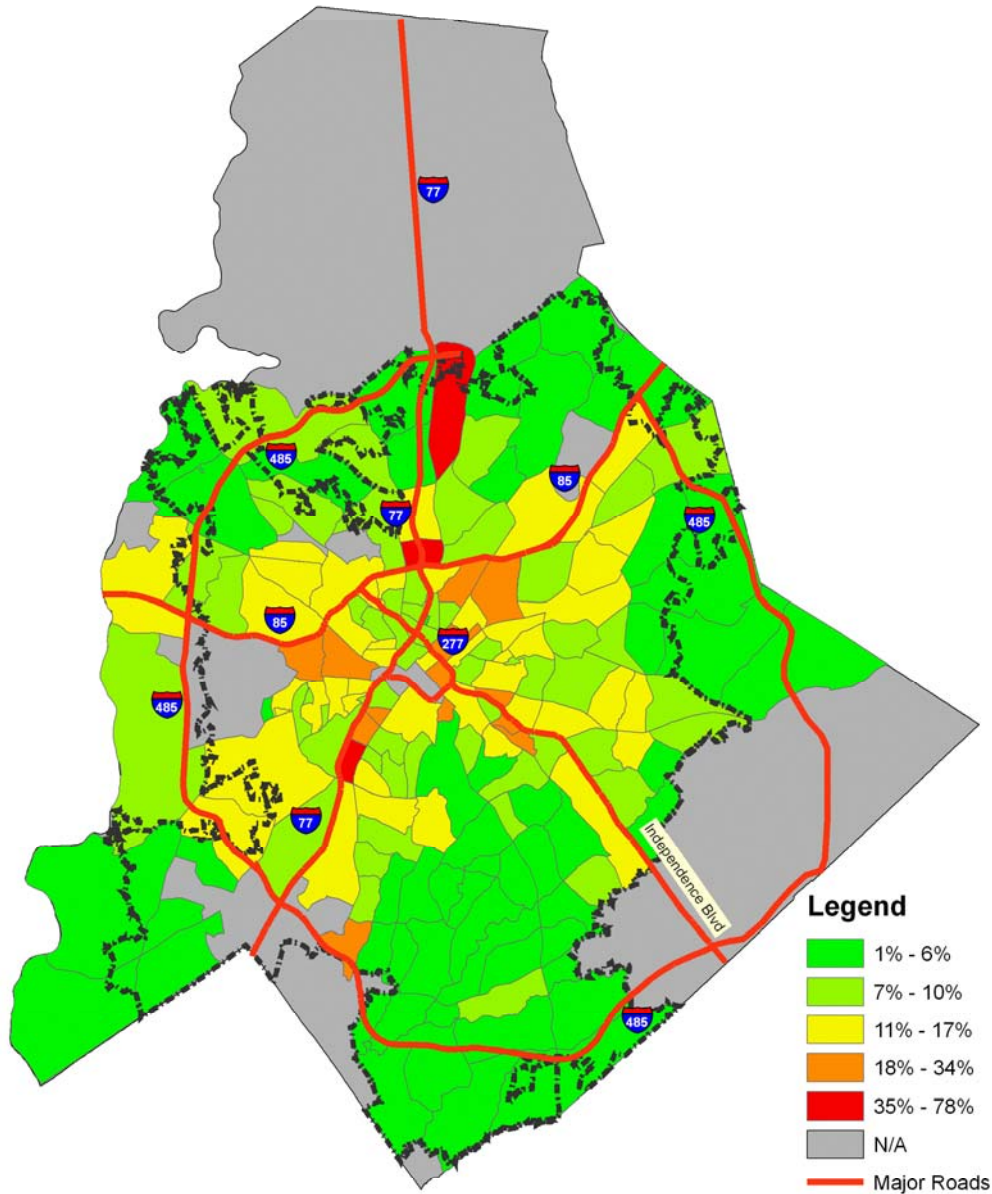
0   2.5   5   10 Miles

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Figure 5
Property Crime Rate Change
2005 - 2007

Legend

- ■ -53% - -20%
- ■ -19% - 1%
- ■ 2% - 23%
- ■ 24% - 55%
- ■ 56% - 122%
- ■ N/A
- — Major Roads
- ⌐⌐⌐ City Limits
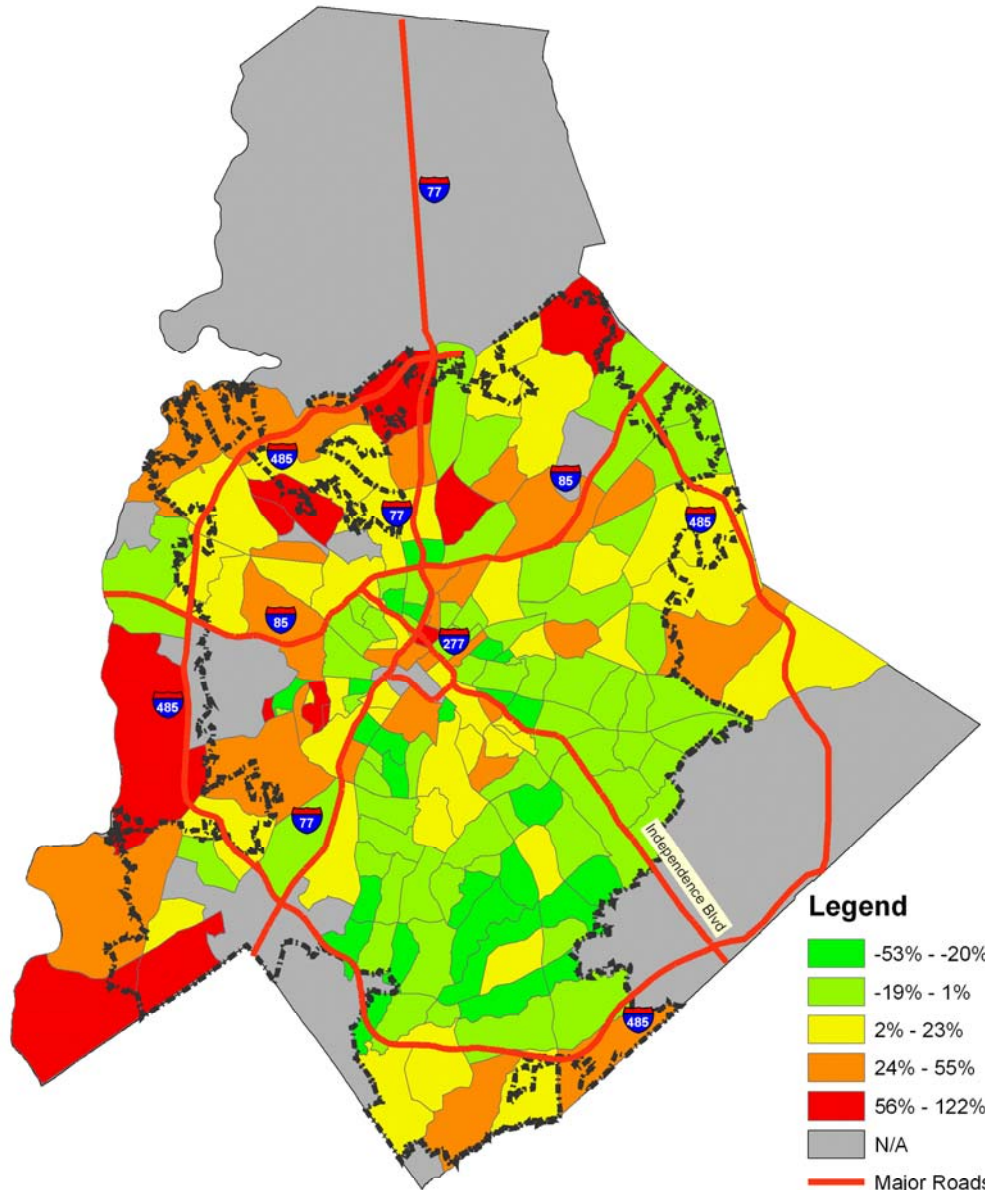
0   2.5   5   10 Miles

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operationalized in Research Model 1. It is graphically represented in Figure 6. During the

statistical modeling process, it will be possible to control the impact of individual

variables in the research model. Thus, the relative importance of Section 8 households

can be measured for significance.

A preliminary analysis of NSA scale crime and Section 8 households (stated

earlier) found a moderate correlation of .382. In other words, the percent of Section 8

households at the NSA level accounted for almost 38.2 percent of the variability of the

property crime at the NSA level. However, this analysis did not account for the other

neighborhood characteristics, nor the other variables included in this hypothesis.
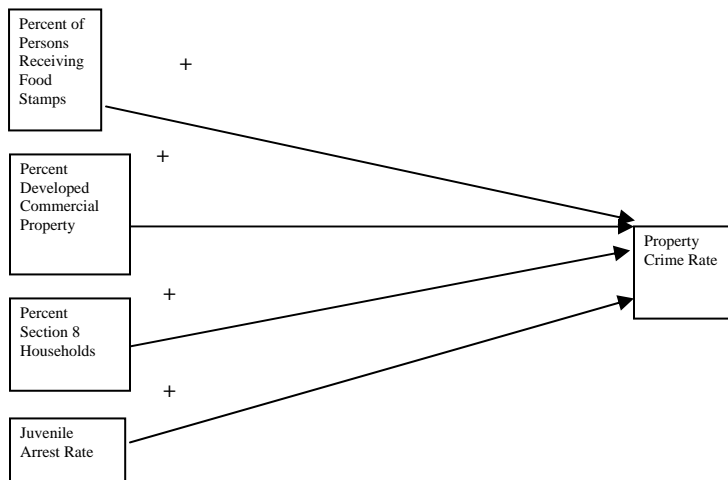

Figure 6. Research Model #1

Hypothesis – Model #2

The second model looked at the ***change*** in property crime as it relates to the ***change*** in Section 8 households living in all housing types. This model included the same predictor variables used in model 1, including the percentage of Section 8 households, the percent of persons receiving food stamps, the percent of developed commercial property, and the juvenile arrest rate. The hypothesized operation of these variables was also expected to be positive. That is to say, as each variable increased, the change in property crime rate would also increase. Figure 7 represents the model and the operational direction of the variables. Again, it is possible to control the impact of individual variables in the research model. Consequently, the relative importance of Section 8 households can be measured for significance.

A preliminary analysis of the NSA change in property crime and change in Section 8 housing found a weak correlation. The calculated coefficient was .083. This means that, taken alone, the change in Section 8 housing at the neighborhood level accounted for only 8.3 percent of the variability of the change in property crime. But, this analysis did not account for the other neighborhood characteristics such as socioeconomic variables and the built environment.
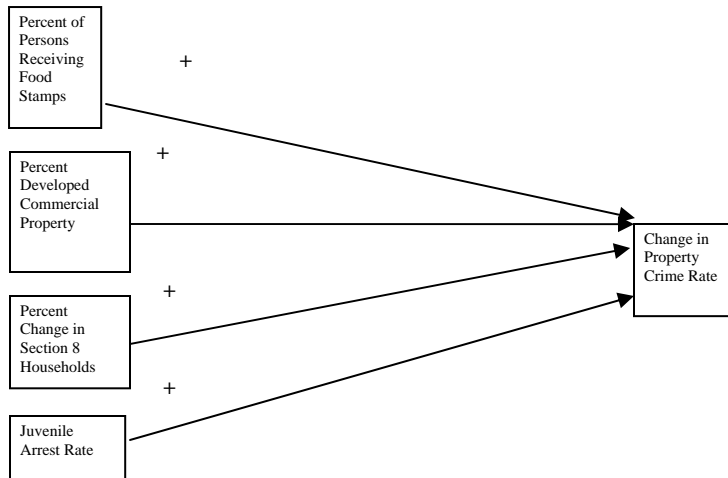
Percent of
Persons
Receiving
Food
Stamps

Percent
Developed
Commercial
Property

Percent
Change in
Section 8
Households

Juvenile
Arrest Rate

+

+

+

+

Change in
Property
Crime Rate

Figure 7. Research Model #2

Hypothesis – Model #3

The final model examined the relationship between change in property crime linked to the proximity to Section 8 households living in single family properties. Multi-family properties were excluded because it is impossible to determine the exact location of the voucher households on a multi-family parcel. This analysis compared two groups of properties. The first group consisted of single family properties that were formerly occupied by non-Section 8 families, but had become Section 8 homes. In 2005, these properties were occupied by non-Section 8 households. During the following two years, 2006 and 2007, these homes were occupied by Section 8 households. The second grouping was homes that were continuously occupied by Section 8 voucher holders between 2005 and 2007. The change in property crime for the two groups was measured at four distance intervals from the homes. The first interval was the home property. In

other words, a property crime at the home. The second interval was within 100 feet of the property. The third and fourth intervals are one-eighth mile and a quarter mile radii, respectively.

Within this framework, there were two research hypotheses. The first hypothesis was that property crime rates (change) will increase significantly as residential properties transition from non-Section 8 residents to Section 8 voucher holders. The second hypothesis examined the impact of distance to Section 8 household on changes in property crime. The expectation was that criminal activity would decline with distance from the Section 8 property.

RESEARCH FINDINGS

The tests of hypotheses 1 and 2 were examined by using an ordinary least squares regression model. This type of statistical analysis is widely used in the sciences to predict the value of a variable, labeled the dependent variable, using values of independent or predictor variables. An R^2 coefficient represents the strength of the association between the independent and dependent variables. The potential co-efficient values can range from 1.0 to 0.0, with the former representing 100 percent explanatory power and a zero percent explanation in the latter.

Model 1

The proportion of Section 8 vouchers in individual NSAs ranged from zero to 13 percent. All of the other independent variables exhibited a much wider range in their distribution. The most extreme distribution surrounded the proportion of developed

commercial property, a difference of one to 88 percent. The dependent variable, the property crime rate, ranged from one percent to 78 percent.

The least square regression results found little support for the hypotheses that there is a significant relationship between the proportion of Section 8 households in a neighborhood (NSA) and property crime rate. The overall adjusted R^2 coefficient for the model is .529. This translated into the full model explaining nearly 53 percent of the variance in property crime. However, the standardized coefficient, the measurement of the role of each variable in the overall model performance showed that Section 8 households are negatively related to property crime and only weakly contributed to overall model precision. The standardized coefficient for Section 8 households, -.097, indicated less than a 10 percent linkage. More importantly, the direction of the coefficient showed that as property crime increases, Section 8 household concentration decreased. Conversely, much stronger variables predicting property crime were commercial property and percentage of persons receiving food stamps.

Model 2

With Model 2, there were only 154 NSAs included in the analysis. This was because 19 NSAs did not register any changes in Section 8 households during the analysis period. Thus, there were slight changes in the descriptive data. The percent change in Section 8 households among NSAs ranged from -100 percent to 107.7 percent, with a change of 40 percent. Overall, there was less variability in the range of data in Model 2. The dependent variable, the change in property crime, ranged from a decrease in 53 percent to an increase of 121 percent.

The findings of the analysis do not support the hypothesis that there was a relationship between the change in property crime and the change in Section 8 households at the NSA level. The adjusted R^2 for the entire model was 0.0. This means that there was no detectable relationship between the change in property crime and this set of variables. The standardized coefficient for the percentage change in Section 8 households was .153, indicating only a weak linkage. Population change was included in an additional model and did not improve the explanation of our variable of interest, the change in section 8 households.

Model 3

The data present on Table 1 presents the change in crime data occurring at single-family properties occupied by Section 8 voucher holders in two groups analyzed. The first group, labeled Group 1, included 446 homes. The second group, labeled Group 2, encompassed 1,515 single family properties. During the analysis timeframe, property crime offenses increased 53.5 percent in Group 1 and 23.5 percent in Group 2. During this same period, citywide property crime grew by a much lower seven percent. These data indicate that both groups of Section 8 households experienced increasing property crime offenses at a higher rate than the citywide experience.

Table 1. Distance Interval #1 – Property Address

Number of Property Crime Offenses at Section 8 Address			
	July 2004 – June 2005	July 2006 – June 2007	Percent Change
Group #1 - Section 8 Begins in 2006	71	109	53.5%
Group #2 - Section 8 Remains Constant	238	294	23.5%
Citywide Statistics	48,671	52,097	7.0%

Table 2 begins to present the change in property crime rates in areas surrounding the homes of Section 8 voucher holders. The separation analyzed in this table was 100 feet. With this distance, Group 1 experienced an increase of almost 30 percent. However, this jump included property crime at the home/parcel. These were the data presented in Table 2. If property crimes that occurred at the property address are removed, the change drops to 14 percent increase. For Group 2, the increase in property crimes was almost negligible, only .03 percent. If property crimes occurring at the property address are removed, the area surrounding the property address actually experienced a **drop** in property crimes. This rate of decrease was 14 percent.

Table 2. Distance Interval #2 – 100 feet

Number of Property Crime Offenses within 100 ft			
	July 2004 – June 2005	July 2006 – June 2007	Percent Change
Group #1 - Section 8 Begins in 2006	192	248	29.2%
Group #2 - Section 8 Remains Constant	635	637	0.3%
Citywide Statistics	48,671	52,097	7.0%

The analyses of distance impacts calculated at the one-eight and one-quarter mile scales are presented on Tables 3 and 4, respectively. Each of the analysis included the property crime increase at the address of the Section 8 voucher holder. But, even with the higher levels of activity, the analysis pointed to lower increases in the neighborhoods surrounding Section 8 single-family homes than the citywide average.

The overall findings of the Model 3 analysis revealed higher than average property crime in the single-family properties occupied by Section 8 voucher holders, but

no significant spillover in the immediate properties or the surrounding neighborhoods where voucher holders live.

Table 3. Distance Interval #3 – 660 feet

Number of Property Crime Offenses within 660 ft (1/8 mile)			
	July 2004 – June 2005	July 2006 – June 2007	Percent Change
Group #1 - Section 8 Begins in 2006	4,128	4,155	0.7%
Group #2 - Section 8 Remains Constant	9,581	10,117	5.6%
Citywide Statistics	48,671	52,097	7.0%

Table 4. Distance Interval #4 – 1320 feet

Number of Property Crime Offenses within 1320 feet (1/4 mile)			
	July 2004 – June 2005	July 2006 – June 2007	Percent Change
Group #1 - Section 8 Begins in 2006	10,945	11,562	5.6%
Group #2 - Section 8 Remains Constant	20,278	21,355	5.3%
Citywide Statistics	48,671	52,097	7.0%

STUDY CONCLUSIONS

A key challenge for organizations and agencies working to address the need for affordable and decent housing options for low income residents are perceptions and misinformation that surround the impact of housing programs for the poor. The Section 8 housing program is especially misunderstood and surrounded by negative publicity and

misinformation. Perhaps the most significant negative externality surrounding Section 8 housing is that increased criminal behavior accompanies voucher holders.

This study was designed and carried out to empirically examine the validity of the common perceptions of Section 8 housing in Charlotte, NC. The research was grounded in the professional literature reporting on the experiences of other communities. The data that were used in the analysis were sourced from local governments and agencies and thus represented the Charlotte experience. The research design was constructed to reflect accepted professional standards. The summative findings of the study follow:

- There is no significant statistical evidence that supports the notion that the percentage of Section 8 households is a predictor for property crime rates in a neighborhood (Research Model 1).

- There is no significant statistical evidence that increasing proportions of Section 8 households in a Charlotte neighborhood result in increasing rates of property crime offenses (Research Model 2).

- There is significant evidence that property crime offenses are higher at single-family residential properties, newly occupied or constantly occupied by Section 8 voucher holders (Research Model 3).

- There is no significant evidence that property crime offenses increase in adjacent and nearby single-family residential parcels owing to proximity to single-family houses occupied by Section 8 householders (Research Model 3).

- Taken together, the research findings do not provide evidence for a negative property crime "spillover" effect associated with the Charlotte Housing Authority Section 8 voucher program.

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