The Effects of White Flight and Urban Decay in Suburban Cook County

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I. Introduction

Chicago, like any major city, is extremely diverse racially as well as economically. However, these interesting qualities do not stop at the city limits. The estimated population of the Chicago suburbs located in Cook County, IL is 2.44 million. Not only is this population almost bigger than the city itself, but it also exhibits equal diversity. For example, the population of suburbs like Kenilworth are 97% white and others like Phoenix are 1% white. Other suburbs like Riverdale have demographically transformed with the minority composition increasing by 80% in only twenty years. Similarly, these suburbs are also extremely economically polarized as places like Winnetka have a median income of $235,000 and places like Ford Heights have a median income of $19,000.

With that in mind, the Chicago suburbs have experienced an unusual pattern of change over the past thirty years. Many metropolitan areas have experienced out-migration of white residents away from the inner city to the suburbs, called “white flight,” coupled with economic decline called “urban decay.” However, Chicago is one of the few metropolitan areas to experience white flight and urban decay within the suburbs. Madden (2002) finds that Chicago and Boston are the only two major cities where the concentration of poverty grew at a faster rate in the suburbs than in the inner city from 1980 to 2000. Although a great deal of research has addressed the causes of white flight and urban decay in inner cities, few studies have addressed these issues in suburban areas. This study will build on previous literature and test whether white flight and urban decay have affected the Chicago suburbs in the same way they have affected inner cities.

II. Literature Review

Over the course of the past several decades many studies have focused on urban decay and white flight. However, rather than focusing on the effects of these changes most studies have tried to explain and predict this neighborhood change with most research dealing solely with urban decay in cities. This paper will build on previous research and examine the implications of white flight and urban decay, especially focusing on the suburban context.

The literature offers two popular explanations of neighborhood change: the filtering theory and the racial tipping point theory. First, the filtering model, introduced by Hoyt (1933) and developed by Smith (1963), explains neighborhood change as a function of decisions made by property owners. Accordingly, because the maintenance costs of a unit rise with the age, homeowners and landlords will invest decreasing amounts of capital as buildings age. Thus as the housing stock ages, owners invest less and less in their properties. Rather than making home repairs, more affluent residents move out of the neighborhood into areas with new homes. Sternlieb (1966) relates the filtering theory to the used car market, explaining that when people upgrade to a new car, they sell their old car at a lower price as a used car. Similar is the bid rent model developed by Muth (1969). This model explains neighborhood change as a function of a trade-off between housing quality and proximity to the city. Studies by Fujita (1989) and Leven et al (1976) demonstrate empirical support for the idea that the more affluent will sacrifice commute time for housing quality. Based on this literature, one would expect the age of the housing stock and distance from the city center to affect the quality of an area.
The second popular explanation of neighborhood change is the racial tipping point theory. In the 1950s, social scientist Morton Grodzins (1958) predicted that “once the proportion of non-whites exceeds the limits of the neighborhood’s tolerance for interracial living, whites move out.” The literature refers to this “limit of tolerance” as the racial tipping point. According to the literature, the racial composition of a neighborhood changes somewhat more quickly as the minority population increases. For example, the Chicago Housing Authority’s research from the 1950s shows that once the population of a housing project becomes more than one-third black, most white residents begin to leave (Meyerson and Banfield 1955). On the other hand, studies looking at multiple cities found little evidence for a universal specific tipping-point (Pryor 1971, Goering 1978). A more recent study by Card et al (2008) finds evidence for a tipping point with a minority population of 5% to 30%, noting that tipping points are higher in cities where whites have more tolerant racial attitudes. Alternatively, other studies (Jego and Roehner 2006, Vidgor 2007) find that white flight may be more of a flight from poverty and decay than a flight from minorities. These studies both note that as neighborhoods decline, middle-class minorities often leave alongside their white counterparts.

Although the causes of urban decay are important, so are the effects. Studies across the fields of political science, sociology, and economics have looked at so-called “neighborhood effects,” or the effects of the surrounding neighborhood atmosphere on the actions of an individual. A growing amount of literature shows that racial residential segregation exposes minorities to health risks (Kitagawa and Hauser 1973), poorer public services and schools (Schneider and Logan 1985), and contributing to their risk of single parenthood (Furstenberg et al 1985, Jencks and Mayer 1989). Furthermore, growing up in poor, racially segregated areas negatively impacts the educational attainment of teenagers, causing lower test scores and higher drop-out rates (Jencks and Mayer 1989). These kinds of neighborhoods also increase the likelihood of committing crimes and the likelihood of teenage pregnancies (Jencks and Mayer 1989, Massey et al 1987, Liska and Bellair 1995). In the words of Massey et al, “residential segregation, by regulating disadvantaged minorities to areas with fewer opportunities and amenities, exacerbates the existing social distance between them and the white majority” (30).

Several studies also address the economic effects of white flight and urban decay. Urban decay decreases housing values by decreasing the desirability of the area (Vidgor 2007, Sampson 2002, Lauria 1998). Some of the literature view the decay and filtering process as beneficial [Hoyt (1993), Vidgor (2007)]. As those with higher incomes continuously move into newer homes, the homes they leave behind become available to those with lower-incomes at more affordable prices. Although lower housing values may make housing more affordable to lower-income residents, the decline in housing values also decreases the tax base and can create slum areas. Ira S. Lowry says:

> The price of decline necessary to bring a dwelling unit within reach of an income group lower then that of the original group also results in a policy of under-maintenance. Rapid deterioration of the housing stock is the cost to the community of rapid depreciation in the price of existing housing.

Similarly, Lauria (1998) finds that low-income segregated areas have low homeownership rates. This low rate of homeownership leads to instability and a lack of investment in the community. Dietz and Haurin (2003) find that because homeowners move less frequently, high rates of homeownership have a stabilizing effect on home values. Homeownership also has a social benefit, as homeowners are more likely to “participate in community organizations, maintain their properties, and participate in politics.” (Dietz and Haurin 2003).

Moreover, as a community declines and affluent consumers leave, so do retailers and industry (Lauria 1998, Gotham 1988, Friedrichs 1993, Hanlon and Vicino 2007). Thus the demand for labor shifts away from declining neighborhoods in favor of high-growth white areas. Adding to the problem, discrimination in the housing market makes it difficult for black workers to move into these high-growth areas. These problems create what is called spatial mismatch. According to the spatial mismatch hypothesis, there will be fewer jobs per worker in minority dominated low-income areas than in white areas (Ihlanfeldt and Sjoquist, 1998). Consequently, minority workers may have difficulty finding jobs, accept lower pay, or have longer commutes.
However, the majority of the aforementioned research deals with cities. Although little research has focused on suburban change, the few existing studies provide sufficient evidence to apply urban decay theory to the suburbs. For example, new evidence shows that suburbs are facing increases in poverty rates, economic segregation, declining incomes, and declining homeownership rates [(Baldassare (1986), Lucy and Philips (2000), Bier (2001), Smith et al (2001)]. As urban historian Kenneth Jackson comments, “The cycle of decline has recently caught up with the suburbs. The old crabgrass frontier is becoming a crabgrass ghetto” (Smith et. al 2001). For instance, with regard to white flight, Card (2008) finds that “there are no systematic differences in the magnitude of tipping discontinuity between central-city and suburban tracts” (202). Similarly, several studies (Madden 2003, Short et al 2007) find that suburbs can experience racial turnover similar to cities. Specifically, Hanlon and Vicino’s 2007 case study of suburban Baltimore shows the decline of the inner suburbs as a function of the age of the housing stock and racial factors. A study of Camden County, New Jersey also shows how the theory behind city decline can be successfully applied to the suburbs (Smith et al 2001). Similarly, while the original concept of spatial mismatch focused on inner-city minorities and the migration of jobs from the city to the suburbs, this dichotomy between city and suburbs no longer holds. Orfield (1997) is one of the latest to point out that many inner suburbs now face problems similar to those of their central cities. Furthermore, Short et al (2007) examines the decline of suburbs by delineating four helpful categories of suburban development: suburban utopia (1890s-1930s), suburban conformity (1945-1960), suburban decline (1960-80), and suburban dichotomy, where some decline and others boom (1980-onward). This study hypothesizes the beginning of suburban decline, as well as the age of the housing stock at which urban decline should occur (housing built from 1945-1960). Furthermore, because this study focuses on changes starting in 1980, the filtering and white flight theories fit in the same time period as the suburban dichotomy. Although inner-city change is an important topic, now more than ever, suburban change needs to be examined. This study attempts to determine whether white flight has the same effects in suburbs as it does in cities, by focusing on the Chicago suburbs located in Cook County, Illinois.

### III. Theory

This study couples the logic of the filtering and white-flight theories. Therefore, sequentially, more affluent residents (who are typically white) move out of a neighborhood to buy new housing rather than investing more and more in their current deteriorating housing. As illustrated by Figure 1, this out-migration decreases the demand for housing. Because the quantity of housing is very inelastic in the short-run, home values fall and quantity does not change. Now, lower-income residents can afford to move into the area. Many times, these in-movers are minorities. Theoretically, this creates a situation of white flight, wherein the remaining white residents will move out increasingly faster as more minority residents move in according to the tipping point theory. While this situation of urban decay may make housing more affordable, the fall in housing values and exit of higher income households decreases the tax base. Consequently, low-income communities are left devoid of resources such as good schools, libraries, infrastructure, and police forces.

![Figure 1: The Effect of Out-Migration on Housing Values](image)

Also, as higher income and thus higher skilled workers leave an area, industry leaves. This decrease in the demand for labor creates a spatial mismatch between jobs and workers leading to unemployment in segregated areas. The decreased spending of lower income residents also leads to a decreased retail presence leading to further unemployment. Furthermore, these decayed areas with a low tax base and failing infrastructure have little ability to attract new sources of employment. As mentioned by a number of studies, the culmination of these
economic declines creates serious social problems.

While all of the theorized effects of white flight and urban decay are important, this study poses four hypotheses testing for the presence of both social and economic problems in the suburban municipalities of Cook County:

Hypothesis 1: Communities experiencing white flight will have lower housing values

Hypothesis 2: Communities experiencing white flight will have lower home ownership rates

Hypothesis 3: Communities experiencing white flight will have higher unemployment rates

Hypothesis 4: Communities experiencing white flight will have a higher proportion of single-parent households.

IV. Empirical Model and Data

Following the empirical model of Liska and Bellair (1995), this study uses a multiple regression framework examining changes over ten-year periods. The dependent variables, as shown in Table 1, are the ten-year changes in the median housing value, the homeownership rate, the unemployment rate, and the single-parent household rate. Each variable shows the change from 1980-1990, and 1990-2000. The study adopts this framework to show change over time because annual data is not available for the suburbs.

Table 1: Definitions of Dependent Variables

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔHousingValues</td>
<td>The ten year change in the median housing value in the municipality in 2005 dollars</td>
<td>SOCDS</td>
</tr>
<tr>
<td>ΔHomeownership rate</td>
<td>The ten year change in the home-ownership rate in the municipality.</td>
<td>SOCDS</td>
</tr>
<tr>
<td>ΔUnemployment</td>
<td>The ten year change in the unemployment rate in the municipality</td>
<td>SOCDS</td>
</tr>
<tr>
<td>ΔSingle Parent HH rate</td>
<td>The ten year change in the percentage of single parent households in the municipality</td>
<td>SOCDS</td>
</tr>
</tbody>
</table>

Although this study tests four different dependent variables, the independent variables remain the same for each equation. Each equation will follow this format:

\[
\Delta \text{Outcome} = \beta_0 + \beta_1 \text{MinorityInitial} + \beta_2 \text{LargeChange} + \beta_3 \Delta \text{HHIncome} + \beta_4 \text{HStock} + e
\]

Wherein, \text{MinorityInitial} is the minority composition in the base year. \text{LargeChange} is dummy variable indicating whether a suburb experienced more than a 10% increase in the minority population over the ten year period. The model includes this term because the tipping point literature suggests that large demographic changes indicate white flight. \(\Delta \text{HHIncome}\) is the change in the median household income. \(\text{HStock}\) is the percent of the housing stock built from 1940-1970. The filtering theory suggests this is the age of housing stock at which decline occurs (Short et al 2007). \(e\) is the error term. These independent variables are shown in Table 2 along with their predicted signs.
The study includes data from 122 Chicago suburbs located in Cook County, IL for years 1980, 1990, and 2000. All data comes from the HUD State of the Cities Data System (SOCDS), with the exception of the age of housing stock data, which is from the US Census. As evidenced by Table 3, on average, the minority composition of the Cook County suburbs increased over the 20 year period. The changes in median household income and median home value on average are of a larger magnitude than the changes in the homeownership and unemployment rates. The single parent household rate increased significantly from 1980-1990, but only by a small amount from 1990-2000.

V. Results

Table 3 divides the sample into two categories—suburbs which experienced more than a 10% change in minority composition and suburbs which experienced less than a 10% in minority composition. As a whole the big change suburbs have experienced different outcomes than the small change suburbs.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Big Change (more than 10%)</th>
<th>Small Change (less than 10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Minority 80</td>
<td>15.40% 15.01</td>
<td>8.2% 19.59</td>
</tr>
<tr>
<td>% Minority 90</td>
<td>33.97% 20.78</td>
<td>11.97% 23.63</td>
</tr>
<tr>
<td>% Minority 00</td>
<td>58.39% 19.86</td>
<td>16.55% 23.46</td>
</tr>
<tr>
<td>Δ Median Household Income 1990-2000</td>
<td>11.48% 3.78</td>
<td>16.80% 11.46</td>
</tr>
<tr>
<td>Δ Median Home Value 1980-1990</td>
<td>$29,631 22,717</td>
<td>$70,525 70,039</td>
</tr>
<tr>
<td>Δ Median Home Value 1990-2000</td>
<td>$43,848 19,275</td>
<td>$72,614 63,267</td>
</tr>
<tr>
<td>Δ Homeownership Rate 1980-1990</td>
<td>1.29% 10.12</td>
<td>1.38% 4.12</td>
</tr>
<tr>
<td>Δ Homeownership Rate 1990-2000</td>
<td>0.80% 2.29</td>
<td>1.29% 3.14</td>
</tr>
</tbody>
</table>
In 1980, 1990, and 2000 the big change suburbs had much higher minority populations. Although household income increased across the board, it increased by much less for the big change suburbs. The same holds for home values. Looking at homeownership rates, the increases were very small in general, but the small change suburbs did experience bigger increases. Moreover, unemployment rates increased in the big change suburbs, but decreased and then remained stagnant in the small change suburbs. Single parent household ratios increased overall from 1980-1990 and by much more in the big suburbs. However, from 1990-2000 this change was very small and actually decreased in the small change suburbs.

Furthermore, the cross-tabular analysis shown in Table 4, shows that 24 of the 26 suburbs experiencing large demographic changes from 1980-1990 also experienced large demographic changes from 1990-2000.

<table>
<thead>
<tr>
<th></th>
<th>1990-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small Change</td>
</tr>
<tr>
<td>Small Change</td>
<td>70 (60.3%)</td>
</tr>
<tr>
<td>Big Change</td>
<td>2 (1.7%)</td>
</tr>
</tbody>
</table>

This result shows support the tipping point theory, indicating that once a municipality begins to change, the change continues.

As evidenced by Table 4, the model yields interesting results. First of all, each of the eight regression models is significant, though the $R^2$ values vary. The model explains a great deal of the variance for the change in home values and single parent household rate, but not as much for the change in the homeownership rates and unemployment rates. The most important finding is that the large change dummy variable has a significant effect in the predicted direction in all categories but the homeownership rate and the 1990-2000 change in housing values. This finding indicates that for the most part, the presence of white flight creates negative consequences. On the other hand, the age of the housing stock is only significant in 1990-2000 homeownership. This finding supports the tipping point theory; wherein municipalities with large demographic changes experience negative economic and social effects, rather than the filtering theory, wherein the age of the housing stock dictates social and economic effects.
### Table 5: Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median Housing Value</th>
<th>Homeownership Rate</th>
<th>Unemployment Rate</th>
<th>Single Parent Household Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80-90</td>
<td>90-00</td>
<td>80-90</td>
<td>90-00</td>
</tr>
<tr>
<td>Constant</td>
<td>-20944.7</td>
<td>-14995.9</td>
<td>-3.05</td>
<td>4.48</td>
</tr>
<tr>
<td>Minority Initial</td>
<td>0.59</td>
<td>-136.45</td>
<td>0.02</td>
<td>-0.04**</td>
</tr>
<tr>
<td>Large Change</td>
<td>-12420.5*</td>
<td>-3515.6</td>
<td>-1.85</td>
<td>0.28</td>
</tr>
<tr>
<td>ΔHH Income</td>
<td>4203.1**</td>
<td>4874.9**</td>
<td>0.18**</td>
<td>-0.01</td>
</tr>
<tr>
<td>HStock</td>
<td>63.33</td>
<td>169.57</td>
<td>0.03</td>
<td>-.052**</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.83</td>
<td>0.80</td>
<td>0.12</td>
<td>0.22</td>
</tr>
<tr>
<td>N</td>
<td>117</td>
<td>119</td>
<td>117</td>
<td>119</td>
</tr>
</tbody>
</table>

* Significant at the .05 level  ** Significant at the .001 level

### Change in Median Housing Values

Comparatively, the model explains this dependent variable the best with an R² of .828 and .801. For both time periods, as predicted the change in median household income had a significant positive effect on the change in median housing values. The values of these coefficients indicate that if the change in median household income increased by $1000, the change in housing values would increase by $4203.10 and $4874.90 respectively for 1980-1990 and 1990-2000. This finding indicates that household income and housing values move in the same direction; thus supporting the theory of urban decay; as lower-status residents move-in, demand for housing decreases and negatively impacting housing values. For 1980-1990, the large change dummy variable was also significant in the expected, negative direction. Therefore, for this ten year period, municipalities experiencing large increases in minority population also experienced significant negative affects on housing values. Interpreting the coefficient, experiencing a large change reduced the change in median housing values by $12,420.50 compared to communities that did not experience a large change. This finding did not hold for housing values from 1990-2000. For this model, the initial minority composition and the percent of the housing stock built from 1940-1970 were not significant.

### Change in the Homeownership Rate

The model explains some of the change in the homeownership rate with R² values of .117 and .222. However, as previously mentioned, the homeownership rate changed very little over either time period. For 1980-1990 only the change in household income had a significant positive effect on the homeownership rate. Interpreting the coefficient, a $1000 increase in median household income increases the change in the homeownership rate by 0.18%. For 1990-2000 only the percent of middle aged housing had a significant effect (negative). This coefficient indicates that a one percent increase in proportion of middle aged housing stock decreases the homeownership rate by 0.052%. This finding is the only one that lends support to the filtering theory.
Change in the Unemployment Rate  The model explains little for the change in the unemployment rate with $R^2$ values of .149 and .028. These low values indicate the need to incorporate other variables into this equation. For 1980-1990, initial minority composition had a significant positive (undesirable) effect on the unemployment rate, as predicted. The coefficient for initial minority indicates that 1% change in the initial minority composition increases the unemployment rate by .025%. For both periods, the large change variable was significant. Interpreting the coefficients, a large change in minority population increases the unemployment rate by 1.54% and .716% respectively. Comparing the coefficients indicates that a large change impacted the unemployment rate more drastically from 1980-1990 than from 1990-2000. The significance of the large change variable follows the theoretical idea that white flight creates spatial mismatch leading to unemployment.

Change in the Single Parent Household Rate  The model explains this variable quite well with $R^2$ values of .694 and .583. The initial minority population and large change variable were significant in the positive (undesirable) direction, as predicted. For the first variable, the coefficients indicate that a 1% change in the initial minority composition increases the single parent household rate by .620% and by .496% respectively. For the large change variable, experiencing a large minority increase increased the single parent household rate by 7.22% and 12.37%, respectively. Here, the effect of large change was stronger from 1990-2000. For the 1980-1990 model, the change in household income was also significant in the predicted negative direction. Interpreting the coefficient, a $1000 increase in household income decreased the single parent household rate by 0.16% (and vice versa). These results also follow the theoretical model, which predicts that white flight will produce negative social outcomes.

VI. Conclusions
This paper presents a rare look at urban decline in the suburban context. Furthermore, it is the first to specifically address suburban Cook County, Illinois. By tracking the relationship between demographic, economic, and social factors overtime, the study lends support the white flight theory yielding several implications.

Studies like Jego and Roehner (2006) have attempted to disprove the white flight theory, claiming that white residents leave an area in response to poverty rather than minorities. This study yields a different conclusion. In the context of the Chicago suburbs, a large demographic change is a significant predictor of decline despite controlling for changes in household income. The change in household income is indeed significant for some of the dependent variables, but the overwhelmingly significant variable is the large demographic change variable which proxies for white flight. However, the model does not explain why white flight has occurred in the Chicago suburbs. Explaining flight would be an important topic for further research.

Furthermore, the models support the idea that the suburbs are experiencing urban decline similar to inner-cities in that white flight produces negative economic and social outcomes. First of all, white flight and urban decay significantly impact housing values. Although declining housing values may make housing more affordable, the social problems that accompany urban decay often outweigh this positive. As suggested by previous research, declining housing values reduce the tax-base, in turn reducing available community funds. Further research should analyze these possible effects such as poor infrastructure and underachieving schools. Although the literature suggests that urban decay should decrease the homeownership rate, in this case, homeownership rates remained fairly stable. Perhaps this stability can be attributed to subprime mortgages and predatory lending in low-income areas. With the recent housing crisis and massive amount of foreclosures, further research should use 2010 census data to track the change in homeownership rate. The unemployment rate was also fairly stable, but white flight did significantly affect the small changes that did occur. On the other hand, the model explained the increase in the single parent household rate very well, yielding many implications cited in the literature review. Much of the literature on single parent households has revealed negative consequences for children. For example, “according to a growing body of research, children in single parent homes do worse than children in intact families” (Jencks and Mayer 1989).
Overall, because this study reveals similarities between the inner-city and suburban contexts of urban decay, local suburban governments can perhaps follow the lead of cities who have successfully implemented revitalization techniques like adding new housing and creating “green” jobs. Local governments should also try to prevent further segregation and white flight by cracking down on practices like blockbusting and racial steering, wherein real estate agents use the threat of urban decline as a scare tactic to convince white residents to sell their homes or steer white buyers into white areas. Government officials should also take precaution so that the practice of redlining, does not affect these decayed suburbs. Redlining is the practice of denying, or increasing the cost of, services such as banking, insurance, access to jobs, access to health care, or even supermarkets to residents in certain, often racially determined, areas. This practice has occurred frequently in inner-cities, thus suburban officials should take measures to avoid this fate.

REFERENCES


