Local Residential Mobility as a Dimension of Rural Disadvantage

by

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I. Introduction

Residential mobility is often thought to be voluntary, largely opportunity-related, and a primary means for families to improve their economic well-being and/or living circumstances (Cushing 1999). That is, perceived opportunities at migration destinations – an employment change, improved quality of life, a better school district, or other destination attributes – shape the residential change decision-making. Residential movement is therefore often understood as an investment in one's human capital, with movers gravitating towards areas yielding the highest return on that investment (Lichter and Costanzo 1987; Massey 1990). Conversely, by this thinking as an area increases in its levels of economic distress, its out-migration is expected to rise, and its in-migration is expected to decrease (Cadwallader 1992).

However, residential mobility of households experiencing economic distress often does not fit these models. Frequent, often short distance residential movement among resource-limited families within, into and across already distressed communities, may be largely unplanned and unpredictable (Aron and Fitchen 1996; Fitchen 1992). Research completed in rural upstate New York found that this type of residential movement is frequently *not* voluntary but often the consequence of a precipitating crisis or crises, such as family breakup, inability to pay rent, or movement away from unsafe, unaffordable or otherwise unacceptable living conditions (Schafft 2005a; 2005b).

Rather than yielding improved life circumstances, it may result in episodes of temporary homelessness and increased insecurity for the households involved (Fitchen 1994; 1995). Residential instability therefore often only deepens the social instability that precipitated the movement in the first place. The lives of children may be especially disrupted because of broken social ties and, in particular, a disrupted academic experience. Schools themselves face numerous administrative and institutional challenges as large percentages of their enrollments change over the course of the school year (Rumberger 2003; USGAO 1994).

We analyze 2000 census long form data aggregated to the school district level to examine localized rates of residential mobility within rural New York communities, and explore the relationship between local mobility levels and more standard metrics of community disadvantage. In particular, we discuss the implications of high levels of localized mobility for school districts and other community institutions, arguing that this movement may be understood as both a cause and consequence of community disadvantage, with disproportionately negative impacts for children and schools.

The rural communities of New York State provide a likely setting to explore these relationships. Upstate New York, where all of New York's rural school districts are located, is a predominantly rural region that has in the past several decades experienced steady economic decline as a consequence of diminished manufacturing employment and the expansion of lower-wage service sector work (Albrecht et al. 2000; Kuzniak 1999; Pendall et al. 2004). A 1999 study by the Federal Reserve Bank of New York indicated that if the upstate region where considered an independent state, it would rank 48th in the nation for job growth (Deitz and De Mott 1999). As a consequence of outmigration, upstate population under the age of 65 declined by nearly 130,000 between 1993 and 1998 (Parrott et al. 1999). In sum, Upstate New York and its rural communities have experienced sustained economic decline and disadvantage.

II. Exploring the Connection Between Residential Mobility and Rural Disadvantage

Localized high frequency mobility has often been overlooked within the scholarship on the interrelationships between residential mobility, rural poverty and community disadvantage. First, residential mobility has often been conceptualized as a process that tends to produce socioeconomic equilibrium across geographic areas. From this perspective, residential mobility has been understood primarily as a response to economic opportunity at migration destinations, with spatial concentrations of poverty explained away as lags in the adjustment process between labor and capital, exacerbated by the inability or unwillingness of non-movers to relocate (Nord et al. 1995). Second, the data most appropriate for examining high-frequency, localized mobility are not readily available because the numbers of movers and the distances of most moves are too small in scale to be adequately assessed using conventional demographic data (Fitchen 1994).

Additionally, in the United States, the study of the relationship between residential mobility and the well-being of rural people and places has tended to focus on migration *between* metro and nonmetro areas, and the selectivity of these migrant streams rather than more *in situ* residential movement. Research examining the differential selectivity across migrant streams between metropolitan and nonmetropolitan areas, in contradiction to equilibrium models of migration, has described migration stream differentials that tend to structurally disadvantage nonmetropolitan areas through a cumulative *dis*equilibrium. Lichter et al. (1979; 1995), examining the selectivity of both rural-to-urban and urban-to-rural migration streams find that, as compared to non-migrants, migrants in general are younger, better educated and of higher occupational status. However, rural-to-urban migrants are younger, more highly educated and have higher occupational status than their urban-to-rural counterparts, and in addition, the urban-to-rural migration stream is "disproportionately comprised of the jobless, as well as the poor and the near-poor" (1993:241), findings similar to those of Voss and Fuguitt (1991) and Nord et al. (1995). In sum, as Cushing and Rogers explain in their study of migration and persistent poverty in Central Appalachia,

> "Those most likely to migrate out of declining and distressed areas are the young, the well educated, and the affluent individuals. In cases of severe stress and decline, those that remain will disproportionately be those who

> are immobile, and therefore stuck in poverty with little choice but to muddle through. High psychic costs and unaffordable financial costs of moving, lack of information about alternatives, obsolescence of job skills (structural unemployment), and often age substantially reduce mobility for those individuals" (1996: 33).

But what about "those that remain"? Are they truly immobile? Although there has been relatively little research of poverty-related localized residential mobility within rural areas, these studies have nonetheless suggested not only the prevalence of this type of residential mobility, but also how this movement may function as both a consequence *and* determinant of rural disadvantage.

Fitchen's work in rural upstate New York as well as other rural regions in the United States (1992; 1994; 1995) noted that among many rural low income families on the edge of homelessness, high frequency, short-distance moves were spurred by inaffordability of housing in relation to the income of poor households, as well as a range of poverty-related social and economic stressors. In addition to having negative impacts on childhood education as well as on schools faced with unpredictable enrollments, her work also noted that frequent moves may substantially "undermine the effectiveness of various adult programs on education, personal development, and employment training that are intended to help break the cycle of poverty" (1994: 435).

Schools are among the primary community institutions affected by household transiency because of the often pronounced student mobility that results (Capps and Maxwell 2002; Foulkes 2002; G.A.O. 1994; Rumberger 2003; Schafft 2003, 2005b). Research strongly suggests that frequent student movement not only may have significantly negative consequences for mobile students because of academic and social disruption, but may also have negative effects on non-mobile students in schools with high levels of student movement (Bruno and Isken 1996; Rumberger et al. 1999). Schools themselves face challenges in the areas of classroom administration, as well as in district level planning and budgeting. Smaller rural school systems are likely to be disproportionately even *less* able to address the needs of disadvantaged, mobile students due to the more limited fiscal, administrative and institutional resources at their disposal.

III. Data and Methods

The research on poverty-driven mobility underscores the nature of this movement as a community-level phenomenon (Fitchen 1994, 1995; Foulkes 2002) insofar as this movement is often highly localized, its contours shaped by local knowledge of the movers and local social and familial networks. In this paper we use 2000 school district-tabulated sf3 census data to examine residential mobility trends within rural New York school districts and their coincidence with other more conventional indicators of local disadvantage. We use school district tabulations in part because of the demonstrated impacts of residential mobility on schools and school districts through student turnover. Additionally, school districts, particularly in rural areas, also perform key socially

integrative roles and reasonably approximate locality-based communities "where people live and meet daily needs together through group and institutions having distinctively local character and where locality-relevant actions emerge from a variety of resident needs and interests" (Zekeri et al. 1994:221; see also Peshkin 1978). In many rural areas school districts are the single largest employer and in a variety of ways provide local residents with an important shared community identity and social context. In New York school districts tend to be relatively small, uniform in size and generally are centered around distinct municipalities.

In New York State in 2000 there were 720 school districts for which census data were tabulated. The New York State Education Department (NYSED) classifies school districts according to their geographic status as rural, suburban or urban. NYSED identifies 202 school districts in New York located within nonmetropolitan counties and not containing an incorporated city, and classifies them as rural. These are the districts we focus on within this paper (see Figure 1).

Figure 1 About Here

We use three primary indicators of local mobility levels: 1) the percent of occupied housing units within a district that were occupied within one year prior to the census (i.e. "recent housing turnover"); 2) the percent of persons living elsewhere five years prior to the census (i.e. "movers"), and; 3) the percent of movers who lived in the same county five years prior to the census (i.e. "local movers").

There are limitations to these data. First of all, the 5-year time interval for the "movers" and "local movers" variables will miss any and all interim moves. Second, we are not able to use these data to rigorously assess the extent to which residential movement is localized. Our "local movers" variable indicates the percentage of movers who lived within the same county five years prior to the census, but provides no information on the extent to which any interim moves also happened to be local, or within the same county. Additionally, high percentages of newly occupied housing units (and to some extent the other two dependent variables) may be a direct consequence of economic expansion and housing starts rather than poverty-related residential shuffling. However, in our later multivariate analyses we control for changes in housing units between 1990 and 2000.

In sum, despite a 5-year time interval, we argue the "movers" and "local movers" variables still provide an indication of overall mobility levels among local populations. The percent of local movers enables us to gauge the locality of that mobility. The percent of housing turnover enables us to gauge the relative residential instability of a school district.

For our analysis we focus on a key set of variables frequently used in assessing local levels of poverty and disadvantage. These variables correspond to both local opportunity structures as well as individual and household level attributes, including the percent of families living below the poverty line, the percent unemployed, percent female-headed

households and the percent of renting households in which greater than 35 percent of household income is spent on rent (percent housing insecurity).

We also focus on a key set of community-level structural and socioeconomic variables. Socioeconomic variables include: the percent of persons within the active labor force who are unemployed; the percent of female headed households with dependent children under 18; the percent of families with incomes below the poverty line; and the percent of renters who pay in excess of 35% of their income towards housing costs and hence are housing insecure. Because studies have consistently identified the significance of housing variables to poverty and poverty-driven household residential mobility Fitchen 1995; Foulkes 2002; Schafft 2005b), we examine community-level structural variables including: the percent of occupied housing units that are rental units; the percent of single family housing (i.e. single unit structures), and; the age of housing stock within a community. Additionally, we examine the percent of employment in the service sector.

IV. Analysis

Table 1 (below) shows a basic correlation matrix of these variables, showing the Pearson's correlation coefficient. While there does not appear to be a significant relationship between any of the mobility variables and the percent unemployment, the other socioeconomic variables show consistent statistically significant positive relationships with two of the three mobility variables. That is, in communities in which there are higher percentages of female-headed households, higher percentages of families with incomes below the poverty line and higher levels of housing insecurity, higher percentages of housing units will have been recently occupied and higher percentages of the population will have lived elsewhere 5 years preceding the 2000 census. The percentage of movers making within-county moves has a weaker though still statistically significant positive relationship to the percent of female headed households.

Table 1 About Here

Among the community structural variables, again the strongest relationships appear in conjunction with the first two mobility variables: the percent of recently occupied housing units and the percent movers. Mobility is higher in school districts in which there is a higher percentage of rental units and in which there are lower percentages of single family housing. Mobility is also higher in school districts with greater reliance upon service sector employment. The age of the housing stock within a community is not strongly related to local mobility levels, and again none of the structural variables show strong relationships with local mobility.

To gain a better sense of what these relationships mean for communities, in Table 2 we differentiate school districts by upper and lower quintiles for the set of socioeconomic and structural variables. In this table again, the first two mobility variables show the strongest relationship to the set of socioeconomic and structural variables while the

relationship to local mobility is far less defined. While unemployment levels again show no significant effect on mobility, the percent of female headed households and the level of housing insecurity show marked differences in local mobility levels. In rural school districts with the highest percentages of female headed households, almost 16 percent of housing units were newly occupied within the year before the census, while in districts with lowest percentages of female-headed households only about 12 percent of housing units were newly occupied within the year before the census. Housing insecurity also had a marked impact on mobility. In rural school districts with the highest levels of housing insecurity, almost 17 percent of housing units were newly occupied within the year before the census, while in districts with lowest levels of housing insecurity, only about 11 percent of housing units were newly occupied within the year before the census.

Table 2 About Here

Results of Multivariate Analysis

Using the dependency ratio and the percent change in housing units as control variables, we regress *recent mobility* on our socioeconomic and structural measures. While our focus in on current relationships between residential mobility and community disadvantage, we contrast our findings using the 2000 Census with data from the 1990 Census, as well as results examining the inter-censal change (1990-2000). The dependency ratio is included as a community-level age structure control, since mobility and migration occurs more frequently among young adults than other age groups (Schachter 2001). The percent change in housing units is used to control for those communities which may have experienced higher levels of residential mobility due to a significant increase in housing construction.

Since we use percentage measures in our regressions for both the outcome (dependent) variable and the control and predictor (independent) variables, the regression coefficients can be interpreted as elasticities—a one percent change in the predictor variable leads to a beta percent change in the outcome variable. Elasticities are directly comparable to one another and aren't a function of differences in the $\sigma x / \sigma y$ as is true of standardized coefficients. Hence elasticities are even better than standardizing and permit direct comparisons between the influence of different variables on predicting outcomes.

In 2000, approximately 63 percent of the variance in recent mobility across rural school districts can be explained by our independent variables. Using a significance criteria of $p<.05$ or less, a number of variables stand out. The composition of the housing stock in a community/school district is extremely influential in explaining recent mobility. That is, the greater the percent rental housing, and the lower the percent of single family homes, the less stable the housing tenure. With regards to economic conditions, the percent of families in poverty is a relatively strong positive predictor of recent mobility. However, the other socioeconomic variables are less robust. Percent unemployment, percent female headed households, and percent housing insecurity are insignificant in this model. Of the control variables, only the dependency ratio is statistically significant, with a negative relationship to recent mobility.

Table 3 About Here

Looking at the same model using 1990 data yields somewhat similar results (with an adjusted R-square of 0.627), although housing insecurity and service sector employment are non-significant. Unemployment had a positive relationship with recent mobility in 1990, contrasted to the negative relationship it has in 2000. The relative importance of the housing variables in explaining recent mobility is also greater in 1990 than in 2000. Examining change in recent mobility between 1990 and 2000, two of the housing variables (*percent rental* housing and *percent single family* housing) are the only significant variables in the entire model, with an overall adjusted R-square of 0.209.

When we examine a different measure of mobility, this link between measures of community disadvantage and mobility does not hold. In Table 4 below we regress the *percent of movers* on the same set of independent variables used in the previous regression model with recent mobility.

Table 4 About Here

While the adjusted R-squares of the model examining the percent of the population who changed residence in the past five years (*percent movers*) are fairly similar to our last set of regressions (Table 3), the relative contribution of the independent variables is dramatically different, particularly in 2000. In 2000, the structural variables behave similarly as they do with recent mobility, but poverty, unemployment, and housing insecurity do not meet the statistical significance criteria. In 1990, the results are quite different, with the traditional measures of community disadvantage showing up as influential in predicting levels of residential movement over the past 5 years. The composition of the housing stock continues to have an impact, as does employment in the service sector. Age structure (measured by the dependency ratio) is relatively more important in predicting residential movement in the past five years in 1990 than it was in 2000.

Predicting *change* in residential movement in the past five years yields rather different results than when predicting recent mobility as in Table 3. In Table 4, while the model explains approximately 30 percent of the *change* in movers, in Table 3 only 21 percent of the *change* in recent mobility was explained by the model, and certainly different variables stand out as predictors. Changes in rental housing, poverty, unemployment, and age structure are important predictors of change in the percent of residential movement over the past five years across rural school districts.

Table 5 About Here

Our findings are considerably different when using the *percent local movers* as the dependent variable (Table 5). Not only are the adjusted R-squares in all three time instances relatively low compared to the previous models, but neither poverty nor

unemployment contribute to the prediction of levels of local movers. The *percent female-headed households* is the most powerful variable in 2000, while age of housing and housing insecurity share this distinction in 1990. While the coefficients for several variables in 1990 are high (such as poverty, unemployment, percent female headed households), so are their standard errors, thus making them statistically insignificant in the model. The analysis of *change* in local movers between 1990 and 2000 yields a very low adjusted R-square, with the change in rental housing emerging as the only significant predictor.

V. The Implications of Localized Residential Hyper-Mobility for Communities and Schools

Our analyses underscore several points. First, there are numerous and significant positive relationships at the local level between measures of local mobility levels and a range of conventional indicators of disadvantage. Second, mobility is not a uniform or simple phenomenon. The factors contributing to *recent housing turnover* differ significantly than those that predict more general types of residential movement. Our regression analysis of recent mobility (Table 3) supports the notion that, at least in 2000, this particular type of residential mobility is closely associated with general measures of community disadvantage such as poverty, unemployment, and housing insecurity. Higher family poverty yields higher levels of *recent* mobility, controlling for a variety of other factors. Poverty does not appear to have an influence on the more conventional measures of residential mobility (percent movers and percent local movers), except for explaining *change* in those types of mobility over the decade.

Similarly, unemployment operates very differently between these mobility measures. While higher unemployment was strongly associated with general residential mobility in 1990 as well as the change between 1990 and 2000, this relationship disappeared by 2000. Using unemployment in the prediction of *local* residential movement seemed to have virtually no effect. However, with *recent mobility*, unemployment had a statistically significant and *negative* effect in 2000, while a statistically significant and *positive* effect in 1990.[1]

One possible explanation for this change is that the relative effect of *poverty* increased significantly in predicting *recent mobility*, to such an extent that perhaps the communities with higher levels of recent mobility have higher levels of working poor, rather than unemployed. In fact, the reported declines in unemployment rates in many upstate areas in the late 1990s was in large part a result not of economic expansion, but rather of a declining labor force due to discouraged workers and steady outmigration, while the number of working poor families statewide increased by 60 percent over the 1990s[2] (Parrott et al. 1999). These findings are consistent with other national studies of underemployment in the nonmetropolitan United States which generally show underemployment disproportionately affecting rural areas (Slack and Jensen 2002).

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[1] Diagnostic tests showed multicollinearity not to be a factor in influencing these models.

[2] Nationwide, the number of working poor families increased by only 24 percent in comparison to New York's 60 percent.

With housing insecurity appearing in 2000 as a factor, a picture begins to emerge of communities that experience higher levels of recent mobility also experience higher levels of working poor households, who are disproportionately employed in the service sector, renting housing that is financially burdensome. In contrast, the higher levels of general residential mobility (*percent movers*) within communities in 2000 can be explained by the housing variables and employment in services, *not* by any socioeconomic measures typically associated with community disadvantage.

Poverty-driven residential mobility has serious implications for impoverished children and households as well as for communities and community institutions, and in particular public schools. Student transiency resulting from chronic mobility often involves unpredictable costs for districts including increased expenditures on special programs, costs which often are reflected in increased local tax levies. However, despite the effects on school systems, transient students and their families are a largely unrecognized and untargeted population.

Because of this, greater documentation is needed not only of the degree but the *effects* of both student and household movement within and between local school systems and communities, and the relationship to poverty and insecurity, particularly since conventional data sources pose serious challenges for detecting and assessing high frequency local mobility. Greater documentation would place schools and communities in a better position to leverage increased support for high need and highly mobile students and their families, and would also increase our understanding of the structural forces that help shape the relative socioeconomic status of rural people and communities.

Fig. 1. Map of NY School Districts Showing Districts Classified "Rural" by NYSED

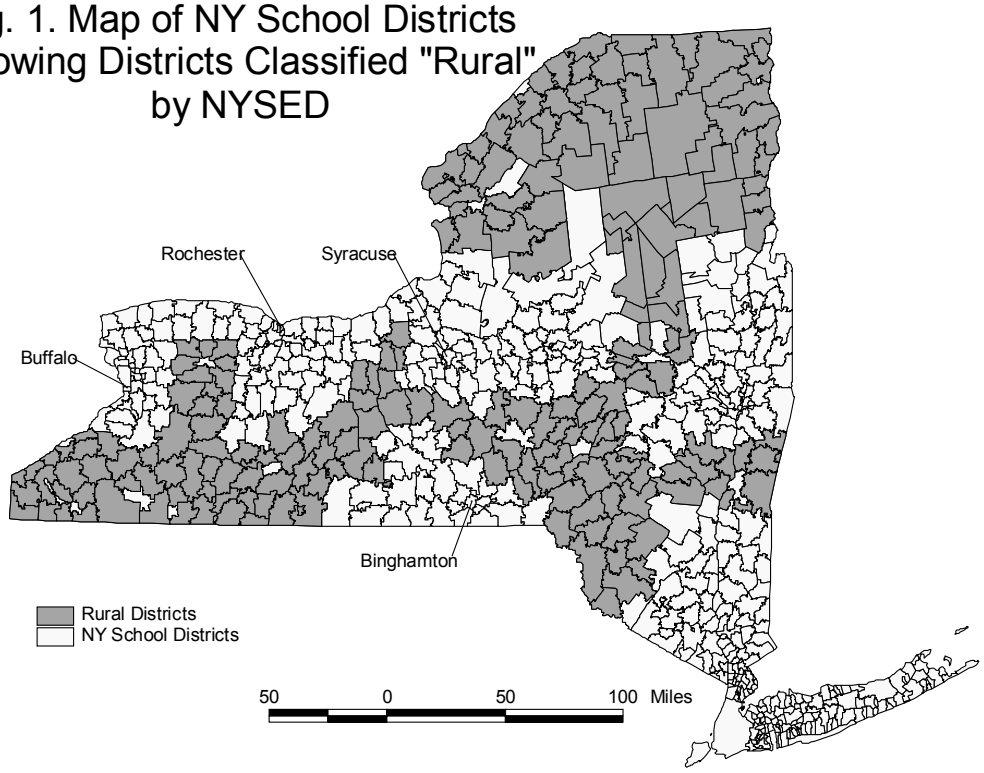

Table 1. Correlation Matrix of Local Mobility and Sociodemographic Variables

	Pct. Housing Units occupied 1 year prior to census	Pct of population living elsewhere 5 years prior to the census	Pct. of movers who moved within same county
Pct. Unemployment	.101	.096	-.104
Pct. Female-headed HHs	.413***	.415***	.146*
Pct. Families below Poverty Line	.307***	.222**	.065
Pct. Housing Insecurity	.695***	.660***	.016
Pct Rental Housing Units	.758***	.701***	-.153*
Pct Single Family Housing	-.495***	-.480***	-.036
Pct Housing Stock 60+ Year Old	.089	.082	.165*
Pct Service Sector Empl.	.322***	.278***	-.098

** p<.05. ** p<.01. ***p<.001 (two-tailed).*
Source: School district tabulated 2000 census sf3 data. N=202.

Table 2. Residential Mobility Levels in Poorer and Wealthier Rural NY School Districts (2000 census data)

	QUINTILE	Pct. Housing Units occupied 1 year prior to census	Pct of population living elsewhere 5 years prior to the census	Pct. of movers who moved within same county
Pct. Unemployment	*Highest*	13.77	34.68	56.14
	Lowest	12.52	32.65	57.33
Pct. Female-headed HHs	*Highest*	15.62***	37.46***	58.06
	Lowest	11.67	31.50	52.93
Pct. Families below Poverty Line	*Highest*	14.65**	35.95*	58.04
	Lowest	12.07	33.09	55.64
Pct. Housing Insecurity	*Highest*	16.98***	39.15***	57.21
	Lowest	11.17	30.76	53.50
Pct Rental Housing Units	*Highest*	17.25***	39.43***	55.07
	Lowest	11.07	30.59	60.85
Pct Single Family Housing	*Highest*	11.26***	30.21***	54.82
	Lowest	15.89	37.33	57.82
Pct Housing Stock 60+ Year Old	*Highest*	13.67	33.69	61.74**
	Lowest	12.38	32.82	54.07
Pct Service Sector Empl.	*Highest*	14.38***	35.73**	54.17
	Lowest	11.36	32.04	58.04

** p<.05. ** p<.01. ***p<.001.*

Source: School district tabulated 2000 census sf3 data. For each of the highest and lowest quintile, N=40.

Table 3.

PERCENT RECENT HOUSING TURNOVER	1990 b	1990-2000 # b	2000 b
Intercept	14.969	-1.539	13.122
Socioeconomic Variables			
Percent Families in Poverty	0.142*	0.128	0.162**
Percent Unemployed	0.131	-0.039	-0.108
Percent Female-Headed Households	-0.192	-0.162	-0.079
Percent Housing Insecurity	-0.036	-0.014	0.041
Percent Employed in Service Sector	-0.025	0.012	0.079**
Structural Variables			
Percent Rental Housing	0.335***	0.310***	0.262***
Percent Single Family Housing	-0.150***	-0.081*	-0.085***
Percent Housing Stock 60+ Years Old	-0.033	-0.047	0.026
Control Variables			
Dependency Ratio	0.104*	0.012	-0.134**
Percent Change in Housing Units	-	0.033	-0.003
R-Square	0.627	0.209	0.633
N	191	191	191

Source: School district tabulated 1990 and 2000 census sf3 data.
(#) indicates all independent variables in this model are change variables
*** p<.001; ** p<.01; * p<.05

Table 4.

PERCENT MOVERS	**1990 b**	**1990-2000 # b**	**2000 b**
Intercept	18.009	-2.583	35.864
Socioeconomic Variables			
Percent Families in Poverty	-0.209	-0.394*	0.114
Percent Unemployed	0.491***	0.299	-0.141
Percent Female-Headed Households	0.412	0.368	0.144
Percent Housing Insecurity	-0.173***	-0.084	0.049
Percent Employed in Service Sector	0.115*	-0.081	0.109**
Structural Variables			
Percent Rental Housing	0.416***	0.766***	0.365***
Percent Single Family Housing	-0.098	-0.098	-0.109**
Percent Housing Stock 60+ Years Old	-0.200***	0.022	0.043
Control Variables			
Dependency Ratio	0.501***	0.227***	-0.279***
Percent Change in Housing Units		-0.006	0.017
R-Square	0.605	0.293	0.577
N	191	191	191

Source: School district tabulated 1990 and 2000 census sf3 data.
(#) indicates all independent variables in this model are change variables
*** p<.001; ** p<.01; * p<.05

Table 5.

PERCENT LOCAL MOVERS	**1990** **b**	**1990-2000#** **b**	**2000** **b**
Intercept	77.908	2.377	15.643
Socioeconomic Variables			
Percent Families in Poverty	0.419	0.133	-0.209
Percent Unemployed	-0.312	0.216	-0.027
Percent Female-headed Households	-0.563	0.016	2.016*
Percent Housing Insecurity	0.303**	0.017	0.212
Structural Variables			
Percent Rental Housing	-0.157	-0.802***	-0.303
Percent Single Family Housing	0.147	-0.083	-0.091
Percent Housing Stock 60+ Years Old	0.363***	0.275**	0.203*
Percent Employed in Service Sector	-0.054	0.115	-0.296*
Control Variables			
Dependency Ratio	-1.094***	-0.076	1.174***
Percent Change in Housing Units	-	0.061	0.078
R-Square	0.270	0.083	0.196
N	191	191	191

Source: School district tabulated 1990 and 2000 census sf3 data.
(#) indicates all independent variables in this model are change variables
*** p<.001; ** p<.01; * p<.05

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