Quantitative Indicators of Detroit Neighborhood Contexts for Child Development:

Final Report

for

The Skillman Foundation's Good Neighborhoods-Good Schools Initiative

by

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April 28, 2011

The authors wish to thank Kurt Metzger and the staff of Data Driven Detroit for their assistance in the preparation of data used in this report.

The purpose of this project is to develop, implement, and analyze a set of quantitative indicators for census tracts comprising the six Skillman Foundation's Good Neighborhoods-Good Schools Initiative (GN-GS) neighborhoods and for the remaining neighborhoods in the City of Detroit as a group, to gain a comparative, multi-dimensional portrait of the current and evolving neighborhood context in which Detroit's children develop.

This Report provides:

(1) an overview of the scholarly literature on the potential mechanisms about how neighborhood context might affect the development of children;
(2) an overview of the scholarly literature on how these various mechanisms can be measured, either directly or by proxies;
(3) an assessment and comparison of conceptually grounded quantitative indicators for census tracts comprising the six Skillman Foundation's Good Neighborhoods-Good Schools Initiative (GN-GS) neighborhoods and for other neighborhoods in the City of Detroit as a comparison group

I. How Might Neighborhood Effects on Children Transpire?

Prior scholarly works addressing this question have been distinctly segregated, with social scientists focusing on behavioral outcomes and epidemiologists focusing on health outcomes. However, within each subset there is broad theoretical agreement about potential causal pathways of neighborhood effects (Galster, 2011). We therefore will list these mechanisms and describe them only briefly here. A synthesis of these disparate literatures suggests that fifteen (15) distinctive linkages have been advanced. It is useful to group these 15 mechanisms of neighborhood effects under four broad rubrics: social interactive; environmental; geographical; and institutional.

Social-Interactive Mechanisms

This set of mechanisms refers to social processes endogenous to neighborhoods. These processes include:

- *Social Contagion:* Behaviors, aspirations, and attitudes of children may be changed by contact with peers who are neighbors. Under certain conditions these changes can take on contagion dynamics that are akin to "epidemics."
- *Collective Socialization:* Children may be encouraged to conform to local social norms conveyed by neighborhood role models and other social pressures. This socialization effect is characterized by a minimum threshold or critical mass being achieved before a norm can produce noticeable consequences for others in the neighborhood.
- *Social Networks:* Children may be influenced by the interpersonal communication of information and resources of various kinds transmitted through neighbors.
- *Social cohesion and control:* The degree of neighborhood social disorder and its converse, "collective efficacy" (Sampson, Morenoff, and Earls, 1999), may influence a variety of behaviors and psychological reactions of children.
- *Competition:* Under the premise that certain local resources are limited and not pure public goods, this mechanism posits that groups (adults and or children) within the neighborhood will compete for these resources amongst themselves. Because the outcome is a zero-sum game, children's access to these resources (and their resulting opportunities) may be influenced by the ultimate success of their group in "winning" this competition.
- *Relative Deprivation:* This mechanism suggests that residents who have achieved some socioeconomic success will be a source of disamenities for their less-well off neighbors. The latter, it is argued, will view the successful with envy and/or will make them perceive their own relative inferiority as a source of dissatisfaction.
- *Parental Mediation:* The neighborhood may affect (through any of the mechanisms listed under all categories here) parents' physical and mental health, stress, coping skills, sense of efficacy, behaviors, and material resources. All of these, in turn, may affect the home environment in which children are raised

Environmental Mechanisms

Environmental mechanisms refer to natural and human-made attributes of the local space that may affect directly the mental and/or physical health of children without necessarily affecting their behaviors. As in the case of social-interactive mechanism, the environmental category can also assume distinct forms:

- *Exposure to Violence:* If children sense that their property or person is in danger they may suffer psychological and physical responses that may impair their functioning *o*r sensed well-being. These consequences are likely to be even more pronounced if the person has been victimized.
- *Physical Surroundings:* Decayed physical conditions of the built environment (e.g., deteriorated structures and public infrastructure, litter, graffiti) may impart psychological effects on children, such as a sense of powerlessness. Noise may create stress and inhibit decision-making through a process of "environmental overload" (Bell et al., 1996).
- *Toxic Exposure:* Children may be exposed to unhealthy levels of air-, soil-, and/or water-borne pollutants because of the current and historical land uses and other ecological conditions in the neighborhood.

Geographical Mechanisms

Geographic mechanisms refer to aspects of spaces that may affect children's life courses yet do not arise within the neighborhood but rather purely because of the neighborhood's location relative to larger-scale political and economic forces such as:

- *Spatial Mismatch:* Certain neighborhoods may have little accessibility (in either spatial proximity or as mediated by transportation networks) to job opportunities appropriate to the skills of their teen residents, thereby restricting their part-time employment opportunities.
- *Public Services:* Some neighborhoods may be located within local political jurisdictions that offer inferior public services and facilities because of their limited tax base resources, incompetence, corruption, or other operational challenges. These, in turn, may adversely affect the personal development and educational opportunities of children.

Institutional Mechanisms

The last category of mechanisms involves actions by those typically not residing in the given neighborhood, yet who control important institutional resources located there and/or points of interface between neighborhood residents and vital markets:

- *Stigmatization:* Neighborhoods may be stigmatized on the basis of public stereotypes held by powerful institutional or private actors about its current residents. In other cases this may occur regardless of the neighborhood's current population because of its history, environmental or topographical disamenities, style, scale and type of dwellings, or condition of their commercial districts and public spaces. Such stigma may reduce the opportunities of and self-perceptions of children of stigmatized areas in a variety of ways, such as job opportunities and self-esteem.
- *Local Institutional Resources:* Some neighborhoods may have access to few and/or high-quality private, non-profit, or public institutions and organizations, such as benevolent charities, day care facilities, schools, counseling centers, and medical clinics. The lack of same may adversely affect the personal development opportunities and health of children.
- *Local Market Actors:* There may be substantial spatial variations in the prevalence of certain private market actors that may encourage or discourage certain behaviors by neighborhood children, such as liquor stores, fresh food markets, fast food restaurants, and illegal drug markets.

II. How Might These Mechanisms be Measured to Specify Child Developmental Context?

Four things are clear from the research literature on neighborhood indicators. First, no one has come close to assembling a comprehensive set of indicators that directly measure all 15 of the above mechanisms for neighborhoods in any particular urban area over multiple periods. In fact, few indicators that directly measure *any* of these mechanisms are available. Second, most of the neighborhood indicators that have been collected are not direct measures of any of the potential underlying causal mechanisms above; they are only (hopefully useful) proxies. Third, most of the historical neighborhood indicators that are available come from the decennial U.S. census, and thus are reliable only for the years when the censuses are taken. Inter-censal estimates of Census-based indicators (that have been produced by some firms, such as Claritas) are not reliable for many purposes and are especially prone to miss idiosyncratic features or rapid changes in neighborhoods. In spring, 2011, the first wave of five-year-average (2005-2009) American Community Survey (ACS) statistics for census tracts were released by the Bureau of the Census. Though questions have been raised about the reliability of these sample-based figures, we have no reliable alternative but to employ them as the best

current indicators of neighborhood conditions.[1] Fourth, the indicators typically used blur child context and outcome. Ideally, the analyst would wish to have an independent measure of the neighborhood context in which a child is being raised, which subsequently could be modeled with other factors (like home, family, and genetics) to predict child outcomes. Unfortunately, oft-used neighborhood indicators (e.g., unmarried teen birth rates, school dropout rates, asthma rates) implicitly measure child outcomes more directly than context. Thus, they may be better proxies for home, family, and genetic factors than neighborhood factors. However, there remains some ambiguity here, because aggregations of some outcomes for children *may* be decent proxies for the sorts of norms and peer influences that are likely to be one of the important contextual mechanisms (see above) that an individual child might experience in that place. Below we will suggest using some of these aggregate measures that are both outcomes and potential aspects of context, with advance warning about inherent ambiguity of interpretation.

The upshot of these four sobering facts: we can only imperfectly measure the neighborhood developmental context for children at any moment and especially as it may evolve on an annual basis. With this caveat in mind, what *can* we measure for Detroit neighborhoods that can give us useful glimpses of the changing developmental context for disadvantaged children?

In Table 1 we list the various indicators for census tracts that feasibly could be assembled by Data Driven Detroit that are most appropriate for measuring dimensions of child developmental context. The indicators are organized according to the four domains of neighborhood effect mechanisms explained above. We will analyze these indicators below. It is clear from this table that we have available the most indicators related to the social interactive dimension, though as explained above these indicators are proxies and often blur the distinction between context and outcomes. Nevertheless, the neighborhood indicator data we will analyze is by far the most comprehensive in scope ever assembled for the City of Detroit.

[1] We have compared Claritas' estimates of 2009 census tract characteristics with 2005-2009 ACS estimates and concluded that the latter were more reliable.

III. Assessing Quantitative Indicators of Child Developmental Context for Detroit's Neighborhoods

In this section we will highlight salient patterns revealed by the indicators presented in Table 1. Throughout we will use graphic presentations, instead of tables of indicators' numerical values, because we believe they communicate the key messages more effectively. Precise numerical figures upon which the graphs are based are presented in a series of "neighborhood profiles" produced in conjunction with this report. In each chart we have assembled census tract indicators to areas corresponding to the six individual Skillman Foundation GN-GS Initiative neighborhoods and to the remaining census tracts in the City of Detroit as a group. In this manner the reader can easily make comparisons across the six GN-GS neighborhoods as well as benchmark them to the rest of Detroit. The census tracts comprising the GN-GS neighborhoods are shown in Map 1.

In overview, we would offer the following key observations:

- There is considerable variation among the six Skillman Foundation GN-GS Initiative neighborhoods, in multiple indicators of children's developmental context.
- Though several Skillman Foundation GN-GS Initiative neighborhoods offer clearly inferior developmental contexts for children than the other neighborhoods in Detroit on average, this is not uniformly true for all, and not on all dimensions of developmental context.
- Although there is much diversity of context among the Skillman Foundation's GN-GS Initiative neighborhoods, this should not obscure worrisome general trends over the last two decades involving the deterioration of developmental context for children in many dimensions.

Indicators of the Social Interactive Neighborhood Context

Figure 1 presents the indicator for the percentage of the population ages 5-17 years old. Higher percentages may not only mean that there is greater intensity of peer interactions among youth, but it may be increasingly difficult for parents and neighbors to monitor and, if necessary, correct the public behaviors of higher concentrations of youth. It is apparent that this percentage grew rapidly between 1990 and 2000 for all Skillman Foundation GN-GS Initiative neighborhoods and the rest of Detroit. In 2000, Brightmoor, Chadsey/Condon, Cody Rouge, and Osborn had higher fractions of youths aged 5-17 than other Detroit neighborhoods, though

Southwest and Northend Central did not. ACS data fro 2005-2009 indicate that these percentages of youth have been falling considerably since 2000 for four Skillman Foundation GN-GS Initiative neighborhoods and the rest of Detroit; only in Chadsey/Condon and Southwest Detroit did these percentages continue to rise. Current estimates suggest, nevertheless, that the GN-GS neighborhoods and the rest of Detroit have between one-fifth and one-quarter of their population in this age group, a sizable share.

Population density is portrayed in Figure 2. Greater densities are commonly associated with more intense, frequent patterns of social interaction, thereby magnifying the socialization effects of residential context. However, in Detroit lower densities are typically associated with residential abandonment (vacant land and buildings) and areas of non-residential land uses (often abandoned themselves). This form of low-density environment can prove problematic for youth development as it provides easy access to dangerous, unsupervised and perhaps illegal activities and havens for undesirables. Given the continuing population loss of the City of Detroit overall since 1990, it is not surprising that Brightmoor and Northend Central saw comparable reductions in their population densities, as did Osborn since 2000. What is countering the general Detroit trend is the increasing density due to (primarily Hispanic) population increases in Southwest and Chadsey/Condon and, to a lesser degree, Cody Rouge. Again, there is substantial 2009 variation across the six neighborhoods, with Chadsey/Condon being the most and Brightmoor the least dense. One of the GN-GS neighborhoods is less dense than census tracts in the rest of Detroit, on average; two are more dense, and three have about the same density.

The racial-ethnic population group shares are portrayed in Figures 3 and 4. Here again there are dramatic differences among the GN-GS neighborhoods, with Southwest (58%) and Chadsey/Condon (46%) having substantial and rapidly growing Hispanic populations while the other four and the rest of Detroit having only 4% or less Hispanic shares that have barely risen over time; see Figure 3. This pattern attests to the highly concentrated pattern of Hispanic immigration since 1990 focusing on the Southwest and Chadsey/Condon neighborhoods of Detroit. Mirror-image portraits appear when examining the percentage of black residents; see Figure 4. Southwest and Chadsey/Condon evince the lowest and most rapidly declining percentages of black population (estimated at about 17% in 2009). After rising rapidly in three of the other four GN-GS neighborhoods (the exception being already heavily black-occupied Northend Central) and the remainder of Detroit in the 1990s, the solid-majority shares of black population seem to have stabilized or declined slightly subsequently.[2]

[2] The apparent decline may be caused by statistical artifact of more respondents to the ACS listing themselves as “black and another race” instead of merely “black” in prior censuses.

Figure 5 presents information on the percentages of households with children headed by a woman. Female-headed households often are under more stress because of primary responsibilities for the woman for both parenting and breadwinning. Because of these competing demands they may be less able to monitor children's activities or participate formally or informally in the collective enforcement of community norms in public spaces of the neighborhood. Once again, the Southwest and Chadsey/Condon neighborhoods distinguish themselves by having far lower shares (a third or less) of female household heads and by being two of the only three areas (the other being Northend Central) to show a declining share of female household heads since 1990. Brightmoor has the highest and fastest-rising share in 2009 (71%), with the shares also rising rapidly in Osborn and Cody Rouge during the last decade. Nevertheless, three of six GN-GS neighborhoods evince lower rates of female headship than the rest of Detroit, on average. .

Percentages of households with no vehicle available are presented in Figure 6. In a place with a poor, fragmented public bus system like Detroit, lack of a vehicle raises huge barriers to parents' successful negotiation of childcare, work, and other life activities. With the exception of Brightmoor, all GN-GS neighborhoods and the rest of Detroit on average saw a substantial reduction in this percentage during the comparatively prosperous 1990s. Since 2000 this fortuitous trend apparently has stalled in the deteriorating economic climate. Northend Central remains the most deprived by far on this measure, with 34% of its households without access to a vehicle. By contrast, this is true for only 14% of the households in Cody Rouge. As before, the pattern for the rest of Detroit as a whole approximately bisects those of the six GN-GS neighborhoods.

Figure 7 provides indicators for the percentages of the working-age population (16 years and older) who are not employed. Those who are not employed may shape youth by providing negative role models. In addition, they may prove little valuable to youth seeking employment opportunities because of the paucity of employment-related information in their social networks. Here wide inter-neighborhood differences in 1990 have been considerably narrowed over the ensuing two decades, while at the same time the position of all GN-GS neighborhoods and the rest of Detroit on average deteriorated during the last decade. The 2005-2009 estimates indicate that the highest and lowest shares of non-employed are in Northend Central (61%) and Cody Rouge (51%). As before, the pattern for the rest of Detroit as a whole bisects those of the six GN-GS neighborhoods.

Figure 8 portrays the family poverty rate trends. Family poverty not only serves as a proxy for intra-family resources that might be available to children, but also commonly serves as a proxy for community-wide norms and resources available to local institutions that affect youth

opportunities, such as religious groups, clubs, and schools. All geographic areas under consideration except Osborn evinced sharp declines in these percentages during the relatively prosperous 1990s. However, in all GN-GS neighborhoods and the rest of Detroit on average, there have been substantial increases in family poverty rates since 2000. Five of the GN-GS neighborhoods are estimated as having higher family poverty rates than the rest of the city (at 27% on average); the exception is Cody Rouge (19%). In all five of these areas, the poverty rate is 30% or more. This staggering, given that a 20% neighborhood poverty rate has been consistently identified in the research literature as the threshold past which a variety of social problems begin to multiply exponentially (Galster, 2002).

Education credentials of the populations aged 25 and older are portrayed in Figures 9 and 10. Higher shares of neighbors with superior credentials can serve as positive role models and norm-setters, whereas higher shares of dropouts can have the opposite impacts. Percentages of adults lacking a high school diploma declined in all geographic areas in question since 1990, especially sharply in Southwest. The two predominantly Hispanic neighborhoods (Southwest and Chadsey/Condon) manifest the highest dropout rates by far: nearly half of their adult residents lack a diploma, whereas the figure is roughly a quarter or less in the other geographic areas being considered. Not surprisingly, these two neighborhoods also have the lowest percentages of college degree holders (7% or less). However, even in Northend Central, the best-educated GN-GS neighborhood, only 12.5% hold a bachelors degree. Unlike any previous indicator discussed, bachelor degree rates in all six GN-GS neighborhoods are lower than for the rest of the City of Detroit, on average.

Figure 11 presents information on the average length of residency by owner-occupiers in the area. More stable neighborhoods are thought to have higher degrees of collective efficacy, and thus better enforcement of communal norms and acceptable behaviors by youth. Data on this indicator are only available in 2000 and 2005-2009, and the figures suggest a decline of about one year of average duration of residence across the decade in all geographic areas under consideration. The chart is not easily interpretable because three of the GN-GS neighborhoods (Cody rouge, Chadsey/Condon and Southwest) have identical values and Northend Central is indistinguishable from the rest of Detroit. What is clear is that Osborn and especially Brightmoor show considerably shorter average durations of residency for homeowners.

Patterns for homeownership shares are shown in Figure 12. As with stability, higher rates of owner-occupancy yield higher collective efficacy, as homeowners have more financial stake in the neighborhood environment. In all geographic areas under consideration except Cody Rouge and Brightmore, percentages of owner-occupant households are estimated by

ACS to be slightly higher during the 2005-2009 period than in either 1990 or 2000. We do not believe that these indicators for 2005-2009 should be taken at face value, however. The five-year averages used by ACS understate for the impact of the epidemic of home foreclosures that has struck Detroit since 2007. However, we think it notable that homeownership rates in four of six GN-GS neighborhoods (the exceptions being Osborn and Cody Rouge) were estimated as below the average in the rest of Detroit in both 2000 and subsequently.

The percentages of foreign-born population in each area are presented in Figure 13. Southwest and Chadsey/Condon distinguish themselves with their exceptionally high and rapidly growing shares since 1990 (both reaching over one-quarter in 2005-2009), which is over four-times higher than in any other geographic area under investigation. All the other area's shares of foreign-born remained about the same (or fell in the case of Osborn) since 1990 at the same time that the shares in Southwest and Chadsey/Condon were doubling or tripling, primarily due to immigration from Mexico. The last indicator in this category, the percentage of households with a primary language spoken that is not English, is closely related to the prior indicator as can be seen by comparing the virtually identical patterns shown in Figures 14 and 13. What these indicators jointly mean for developmental context is ambiguous, and depends on the ethnicity and birthplace of the children in question. On the one hand, children growing up in an ethnic Mexican enclave can be exposed to considerable positive socialization and supervision, and may be more easily able to procure employment through community-based networks. On the other hand, if this insulation retards the development of English-language skills, educational credentials, and other aspects of cultural capital it can limit immigrant children's opportunities.

Indicators of the Environmental Neighborhood Context

Figures 15, 16 and 17 portray information gathered on the physical environment only once: the 2009 Detroit Residential Parcel Survey. This survey comprehensively documented the conditions on parcels in Detroit neighborhoods, aspects of the environment that could shape developmental context in several ways. First, neighborhoods in visible disrepair may be subjected to the "broken windows syndrome," signaling lack of collective efficacy that will spawn more crime there. Second, abandoned buildings and weedy, debris-strewn vacant lots provide venues for dangerous, unsupervised and perhaps illegal activities by youth, as well as havens for undesirables who may threaten children and youth.

Though we cannot convey trends in individual neighborhoods, we know that in most parts of Detroit there has been a steady increase over the last decades in the indicators of poor housing condition and vacancy shown. Figure 15 portrays the percentages of residential parcels[3] that have vacant properties that are open to intrusion, dangerous, fire-damaged, and/or assessed by the city as in need of demolition. These extremely blighted conditions are present in 4% to 5% of the residential parcels in Brightmoor, Osborn and Northend Central, all above the rest-of-Detroit average of 3.3%. The percentages of occupied residential parcels that are assessed as "poor condition or needing demolition" (see Figure 16) are also highest (in the range of 2%) in Osborn and Northend Central but, surprisingly, not in Brightmoor. Obviously, the most dramatic aspect of the environment of Detroit is its vast swaths of emptiness; see Figure 17. This is certainly manifested in Brightmoor and Chadsey Condon, where 41% of the residential parcels constitute vacant land; Northend Central and Southwest also have much higher rates of vacant parcels than the rest of the city average (38% and 31%, respectively). This pattern is distinctly not manifested in two GH-GS neighborhoods, however. Cody Rouge (5%) and Osborn (9%) are well below the average for the rest of the city. As with so many of the previous indicators, there is substantial heterogeneity among the six GN-GS neighborhoods, and in these neighborhoods' relationship to the average value in the rest of Detroit.

Next we turn to three indicators that measure different aspects of environmental pollution that directly affect the health of children and youth. Figure 18 portrays trends in emissions form each area of three important toxic air pollutants, lead and lead compounds, PCBs, and arsenic. This is measured as total pounds emitted per year of these pollutants combined, standardized by the population of each area. The good news is that in all six GN-GS neighborhoods and the rest of Detroit there has been a substantial reduction in air-born toxins since 1990. Both Cody

[3] The 2009 Detroit Residential Parcel Survey includes data on 1-4 unit residential structures.

Rouge and Brightmoor evince considerably lower-than-average toxic emissions currently, and Chadsey/Condon, Northend Central, and Osborn have not seen measurable levels of toxic emissions since 2004. Only in Southwest do we now see levels of toxic air pollution that roughly match those of the rest of Detroit, on average. Southwest also suffered from a substantial spike in emissions during the middle of the last decade, which fortunately now appears to have abated.

Leaking underground storage tanks are effectively the measure of "Brownfield sites" used by the Michigan Environmental Protection Agency, so we employ this indicator here, standardizing it by the population of the area in question. As Figure 19 shows, over the last decade the incidence of this environmental problem has gotten worse over all GN-GS neighborhoods and the rest of Detroit, on average. This increase had been especially severe in Northend Central, such that it now has the highest incidence of this environmental problem of any GN-GS neighborhood, with Southwest a close second. At the other extreme, Cody Rouge and Brightmoor have by far the lowest incidences of leaking underground tanks, and their rates have bare crept up during the decade.

An oft-used indicator of children's exposure to lead and lead-based compounds in the air, soil, and home is elevated lead levels in the blood. Such elevated levels have been associated with a wide range of severe and permanent damages to children's mental development and behavioral problems. The good news shown in Figure 20 is that the rates of children who had such elevated lead levels in their blood after testing has fallen dramatically in every geographic area under consideration since 2000. The only potentially worrisome exception is the recent upturn in such rates in Brightmoor. The other noteworthy finding is that five GN-GS neighborhoods have lower child lead poisoning rates than the average in the rest of Detroit; Northend Central is the exception.

Indicators of the Geographic Neighborhood Context

Access to employment is the focus of the last indicator: the number of jobs located in the neighborhood, standardized by the number of working-age people (i.e., over age 16) in the neighborhood. Lack of access to jobs may discourage older youth from seeking employment. We have data for the period 2002 to 2008, during relatively depressed economic conditions in Detroit, as shown by the downward-trending figures for the rest of Detroit area in Figure 21. Most of the GN-GS neighborhoods followed this same gradual downward trend, starting from a lower job/worker ration than the rest of Detroit. The one exception is Southwest, whose robust population growth and industrial parks clearly spawned job growth in a variety of industrial and

retail sectors. Northend Central is by far the most job-rich of the areas under consideration, though the trends are muddled by inexplicably inconsistent data for 2005 and 2006.[4]

Indicators of the Institutional Neighborhood Context

Typically the most salient resident concern regarding public service delivery regards safety. This is as it should be, because safety is not only a crucial element of quality of residential life but lack of safety has been shown to cause severe psychological problems for parents and children alike. We therefore consider two indicators of safety, property and violent crime rates, in Figure 22 and 23. Southwest and Chadsey/Condon are clearly the safest of the GN-GS neighborhoods on both dimensions; their rates of both property and violent crime are roughly one-third less than the rest of Detroit's. Cody Rouge and Brightmoor are the next-safest. Crime rates in Northend Central and Osborn have tracked slightly downward during the four years for which we have data, but violent crime rates remain notably higher than any other GN-GS neighborhood and the rest of Detroit.

IV. Summary Sketches of the Six Skillman Foundation Good Neighborhoods-Good Schools Initiative Areas

Having given an assessment of evolving developmental contexts for children in Detroit according to 23 quantitative indicators, we offer a complementary portrait in this section with summary sketches of the Good Neighborhoods-Good Schools Initiative areas.

Northend Central

By most indicators, Northend Central can be considered the most deprived developmental context among the six areas comprising the Skillman Foundation's Good Neighborhoods-Good Schools Initiative. This is an almost exclusively black-occupied area, with virtually no foreign-born, non-English-speaking households. It is rife with vacant land, with 38% of its residential parcels currently sitting unoccupied. It has, compared to the other GN-GS neighborhoods, the highest rates of non-employment, no vehicle access, renter-occupancy, children with elevated blood lead levels, and violent crime, and the second-highest rates of poverty, female headship, residential parcels in poor physical condition and property crime.

[4] Stephen Tibbets, analyst at LEHD where our job indicators were obtained, could provide no conclusive explanation for these inconsistent observations.

Ironically, it has the lowest percentage of children ages 5-17, the least incidence of toxic emissions and leaking underground storage tanks, and the highest job/labor force ratios among the six areas. Nevertheless, strength on these last indicators cannot overshadow the overall inferior developmental conditions in Northend Central.

Brightmoor

Brightmoor is also one of the more disadvantaged GN-GS communities. It is one of the two most abandoned communities, with 41% of its residential land vacant, 5% of its residential parcels with buildings that are vacant, open, dangerous or ready to be demolished, and by far the lowest population density among the GN-GS neighborhoods and well below the rest of Detroit average. Brightmoor has a remaining population where roughly eight of every ten residents are black, with some nontrivial numbers of white residents, but there are very few foreign-born or non-English-speaking households. Brightmoor evinces the highest (and fast-growing) percentage of households with children headed by a female and the highest family poverty rate among the GN-GS areas. It has the second-lowest homeownership rate and the lowest average duration of residence by these homeowners. Though all measured environmental indicators are better in Brightmoor than for the rest of Detroit, there has been a recent upturn in child lead poisoning rates there not reflected elsewhere. Crime rates are roughly average for GN-GS areas and slightly below city-wide averages. Overall, these indicators suggest that the Brightmoor neighborhood provide an inferior developmental context (though perhaps not as inferior as Northend Central)

Osborn

The Osborn GN-GS community has roughly eight of every ten residents who are black, with modest numbers of white residents, but very few foreign-born or non-English-speaking households. Osborn has high percentages of residential parcels that are vacant or with buildings that are open, dangerous or ready to be demolished, though it remains considerably more dense than average. Osborn has the highest percentage of the population aged 5-17 years, the lowest average duration of residence by homeowners, and the lowest numbers of jobs in the neighborhood relative to their labor force, either when compared to the other GN-GS areas or to the rest of Detroit average. It is the area with the highest rate of property crimes and nearly the highest rate of violent crimes. Osborn scores relatively well compared to the rest of the GN-GS neighborhoods and the rest of Detroit, however, in terms of vehicle access, non-

employment rates, homeownership rates, few vacant lots, toxic emissions, leaking underground tanks, and child lead poisoning. In combination, this set of indicators suggests that the Osborn neighborhood provides a generally inferior developmental context in an area where children comprise a high share of the population.

Southwest

The Southwest Detroit neighborhoods stand out from the other GN-GS areas and the rest of the city in its high and growing shares of Hispanic, foreign-born, non-English-speaking population, its low and falling share of black population, and its rapidly growing overall population density. Many indicators in Southwest suggest relative strength in developmental context compared to the rest of Detroit and the other GN-GS areas: jobs/labor force growth, low rates of female-headed households with children, long durations of average homeowner tenancy, few vacant, open, dangerous or undermaintained residential buildings, low rates of lead poisoning, and relative safety. However, many indicators portend vulnerability of the environment for children in Southwest. These include high shares of: population who are not employed, households with no access to a vehicle, family poverty, and (especially) adults with minimal educational credentials and few college degrees, residential parcels that are vacant lots, high toxic emissions, and many leaking underground tanks.

Chadsey / Condon

The Chadsey/Condon neighborhood, like Southwest, are distinguished from the other four GN-GS areas and the rest of the city in their high and growing shares of Hispanic, foreign-born, non-English-speaking population, small and declining share of black population, and growing overall population. It has a high share of children aged 5-17 years old. Many indicators in Chadsey/Condon suggest relative strength in developmental context compared to the rest of Detroit and the other GN-GS areas. It has the lowest rate of female-headed households with children, relatively few households without access to a vehicle, a majority of homeowners, long durations of average homeowner tenancy, and relatively safe, unpolluted conditions. However, several indicators show relative weakness or vulnerability of the environment for children in Chadsey/Condon. These include high shares of: population who are not employed, few jobs located in the neighborhood, family poverty, adults with minimal educational credentials, and residential parcels that are vacant lots.

Cody Rouge

At the extreme among the six GN-GS areas is Cody Rouge. On multiple dimensions this majority black-occupied but racially diverse community offers the strongest developmental context among the six. It had slowly increased its population from 1990 to 2000, and thus has relatively low rates of vacant lots and residential parcels (either vacant or occupied) in poor condition. It evinces the lowest rates of: households with no vehicles, non-employed adults, family poverty, adults with no diploma, toxic emission, and child lead poisoning. It has the highest rates of homeownership and the longest average duration of stay for such owners. On the remaining indicators it ranks in roughly the middle of the six GN-GS neighborhoods. Cody Rouge also has more favorable indicator levels than the average for the rest of Detroit on numerous measures, including rates of: female headship, no available vehicle, non-employment, poverty, lacking high school diploma, owner-occupancy, vacant, open and dangerous residential parcels, poor-condition residential parcels, vacant lots, environmental conditions, and safety.

V. Conclusion

Quantitative indicators serving as proxies for various causal forces operating in neighborhoods that could affect child development paint a richly textured portrait of the six areas comprising the Skillman Foundation's Good Neighborhoods-Good Schools Initiative. These six areas are quite distinctive from each other, and often different from the averages revealed by neighborhoods in the rest of Detroit. They are clearly not exclusively the "most deprived" environments in Detroit, instead offering a variety of developmental contexts for children. The North End Central and Cody Rouge GN-GS neighborhoods offer the most distinctive contrasts.

Although there is much diversity of context among the Skillman Foundation's Good Neighborhoods-Good Schools Initiative areas, this should not obscure worrisome general trends. Though not necessarily manifested in all six areas, the following trends over the last decade are broadly representative of the deteriorating developmental context for children in GN-GS neighborhoods:

- Higher percentages of families with children headed by a female
- Higher rates of non-employment
- Higher family poverty rates

- Lower residential stability among homeowners
- Higher percentages of households without English as the primary language
- More leaking underground storage tanks relative to the population
- Lower numbers of jobs relative to the working-age population

On the other hand, we should not downplay several positive trends over the last decade that generally have manifested themselves across the Skillman Foundation's Good Neighborhoods-Good Schools Initiative areas:

- Declining share of population aged 5-17 years
- Declining shares of adults without a high school diploma
- Rising shares of adults with a college degree
- Lower rates of toxic emissions
- Lower rates of children with lead poisoning
- Lower rates of property and violent crime

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Table 1

Neighborhood Indicators Analyzed

Domain of Mechanism and Indicators Analyzed	Available Years
Social Interactive Mechanisms	
% of population aged 5-17 years	1990, 2000, 2009*
population per square mile	1990, 2000, 2009*
% population Hispanic	1990, 2000, 2009*
% population non-Hispanic Black	1990, 2000, 2009*
% households with children headed by female	1990, 2000, 2009*
% households with no vehicle available	1990, 2000, 2009*
% population age 16+ who are not employed	1990, 2000, 2009*
% families in poverty	1990, 2000, 2009*
% population age 25+ with no high school diploma	1990, 2000, 2009*
% population age 25+ with bachelor's degree or higher	1990, 2000, 2009*
Average length of residency by owner-occupants	2000, 2009
% homes occupied by owner	1990, 2000, 2009*
% population not born in U.S.	1990, 2000
% households w/ primary language not English	1990, 2000

* Average of ACS sample estimates from 2005-2009 surveys

Table 1 (continued)

Neighborhood Indicators Analyzed

Domain of Mechanism and Indicators Analyzed	Available Years
Environmental Mechanisms	
% Res. Parcels Vacant-Open-Dangerous, Fire Damaged, or need Demo	2009
% Occupied Residential Structures in Poor Condition or need Demo	2009
% Residential Parcels that are Vacant Lots	2009
Pounds of Toxic Substances Emitted Annually per Person	1990, 2000 - 2009
# of Leaking Underground Storage Tanks per 10,000 Population	2000-2009
% Children Age 0-15 Tested Who Have Elevated Lead Levels in Blood	2000-2010
Geographic Mechanisms	
# jobs per person age 16+ in labor force	2002-2008
Institutional Mechanisms	
Property Crime Rate per 1,000 Population	2007 - 2010
Violent Crime Rate per 1,000 Population	2007 - 2010

Map 1

The Six Skillman Foundation Good Neighborhood – Good School Initiative Areas

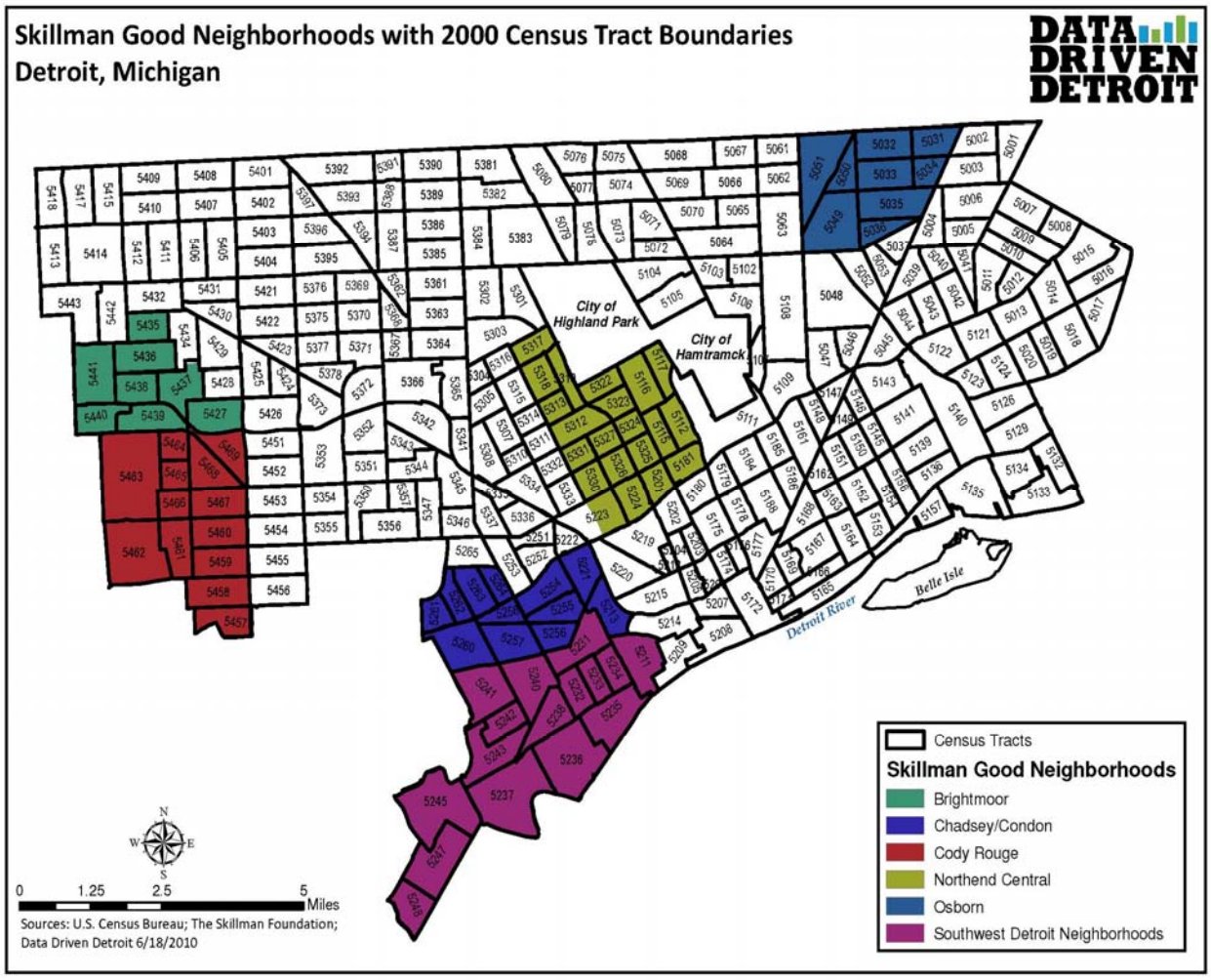


Figure 1

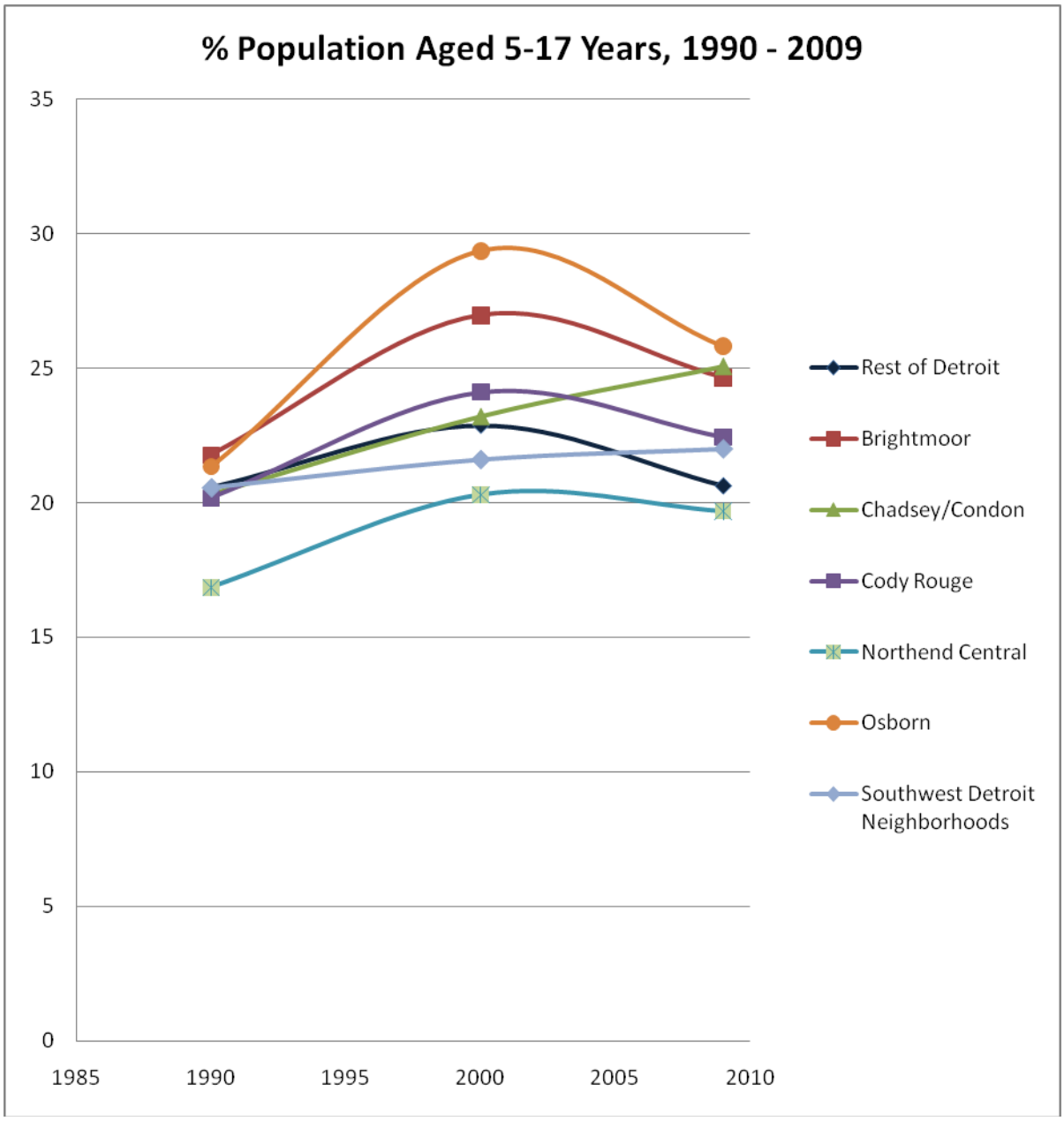

% Population Aged 5-17 Years, 1990 - 2009
35
30
25
20
15
10
5
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 2

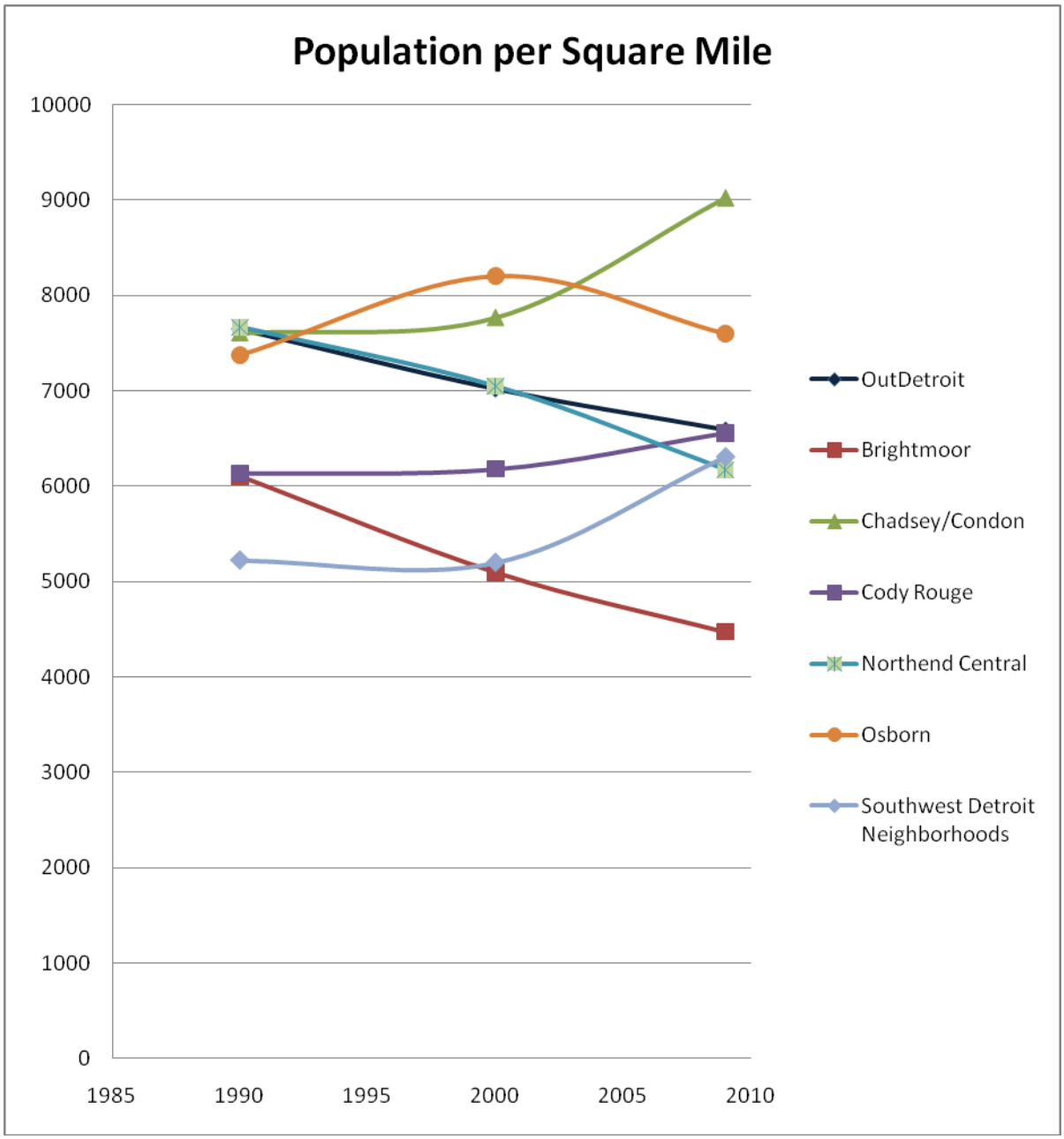

Population per Square Mile
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1985
1990
1995
2000
2005
2010
OutDetroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 3

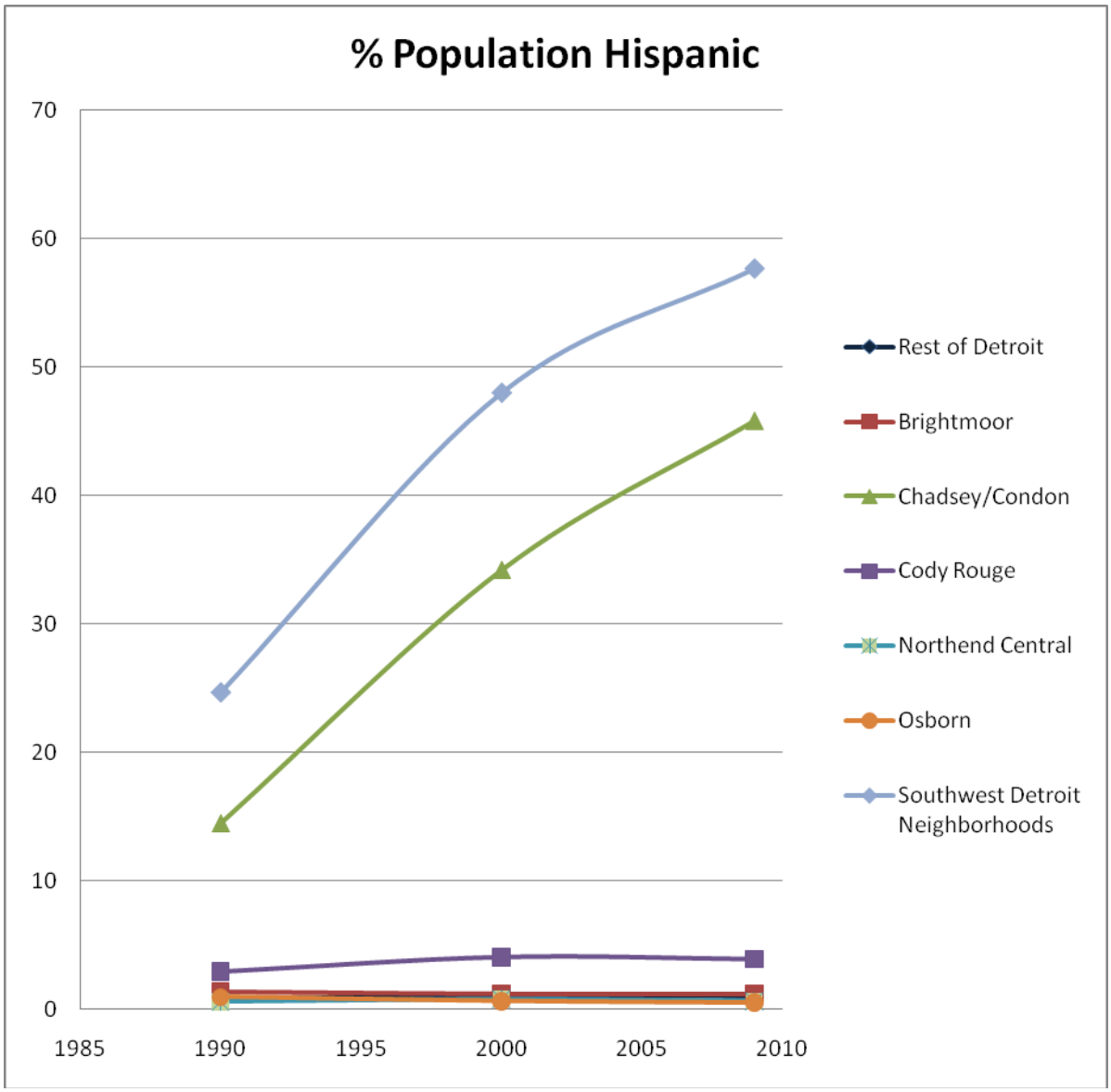

% Population Hispanic
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 4

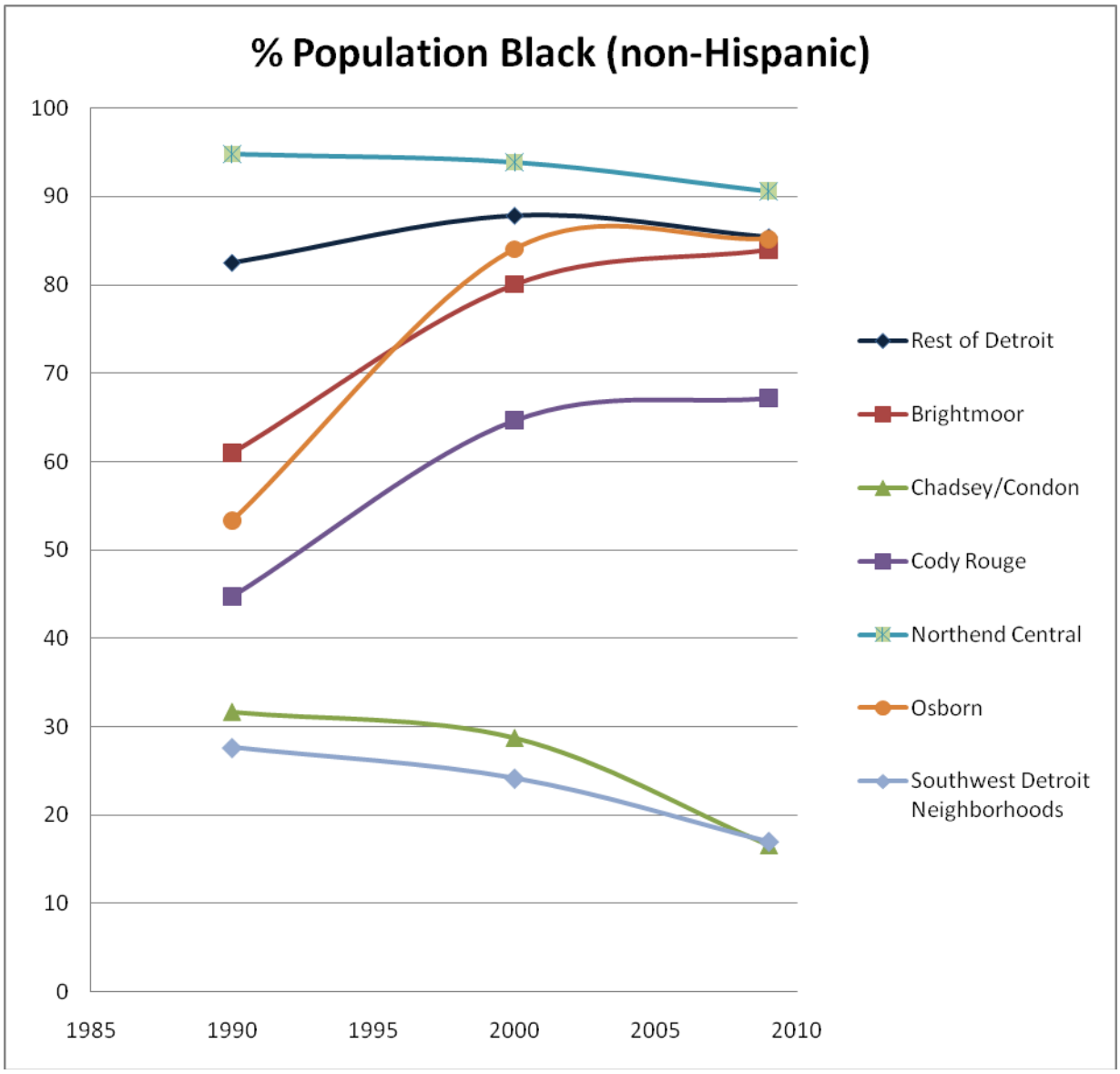

% Population Black (non-Hispanic)
100
90
80
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 5

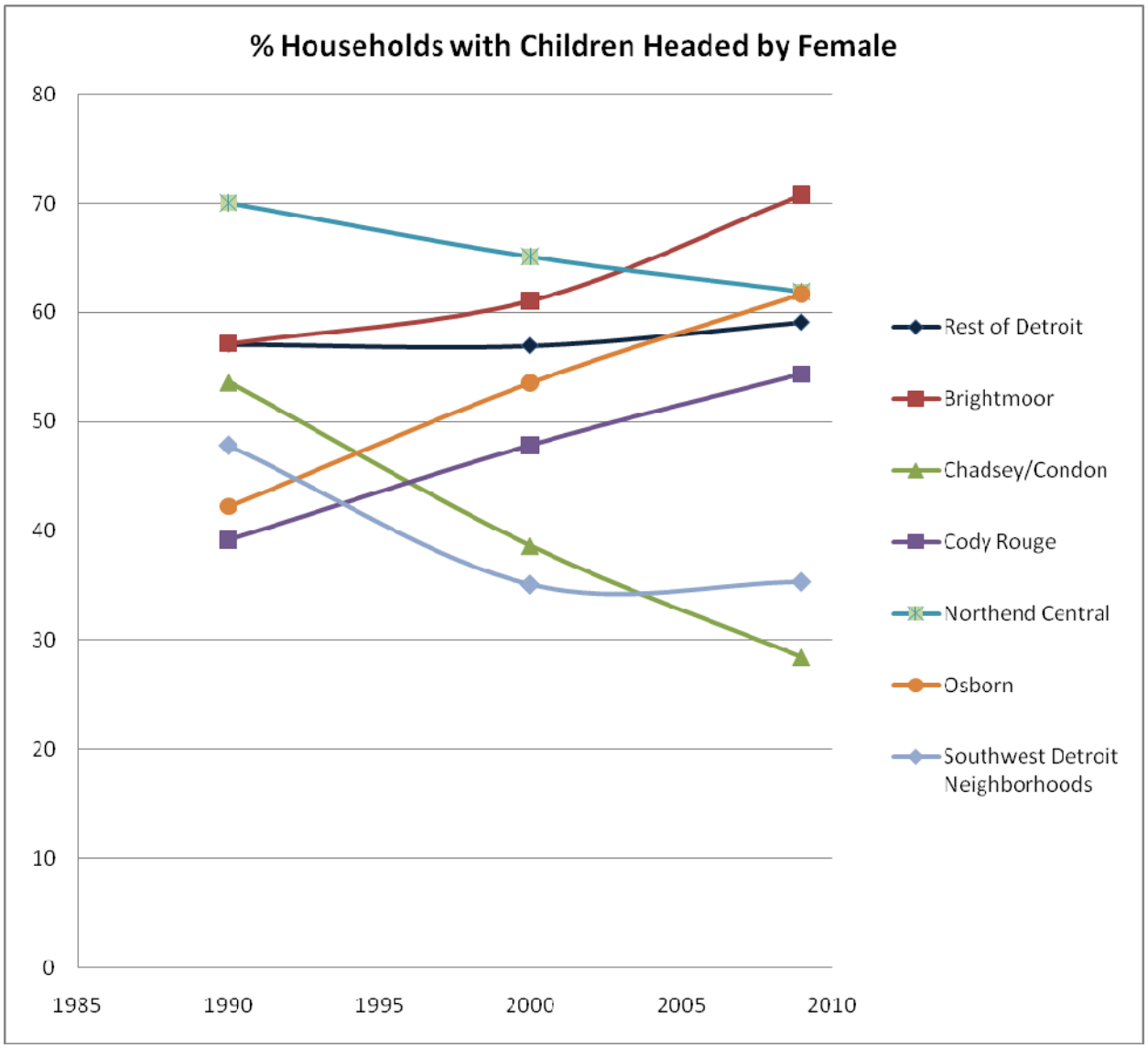

% Households with Children Headed by Female
80
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 6

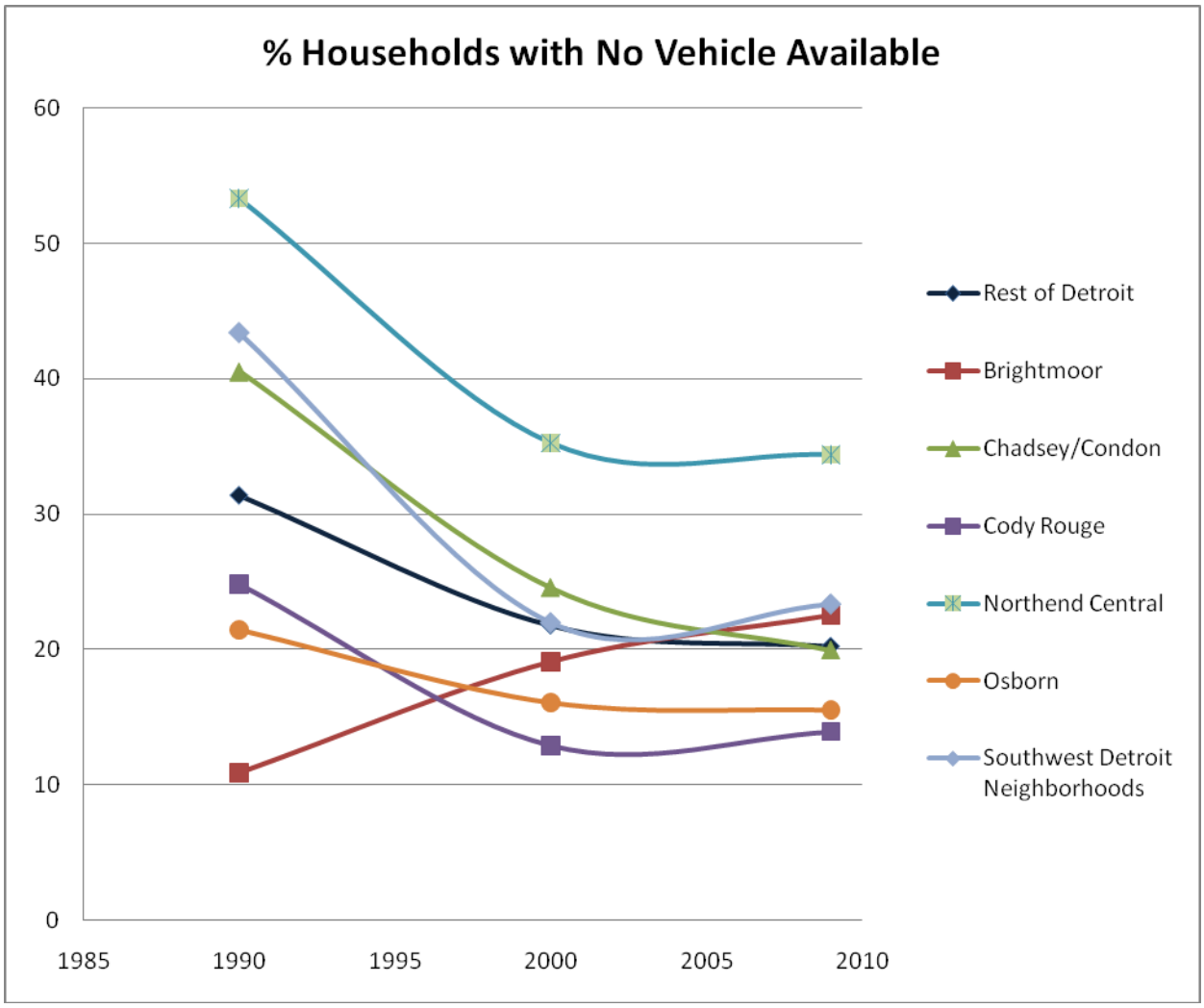

% Households with No Vehicle Available
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 7

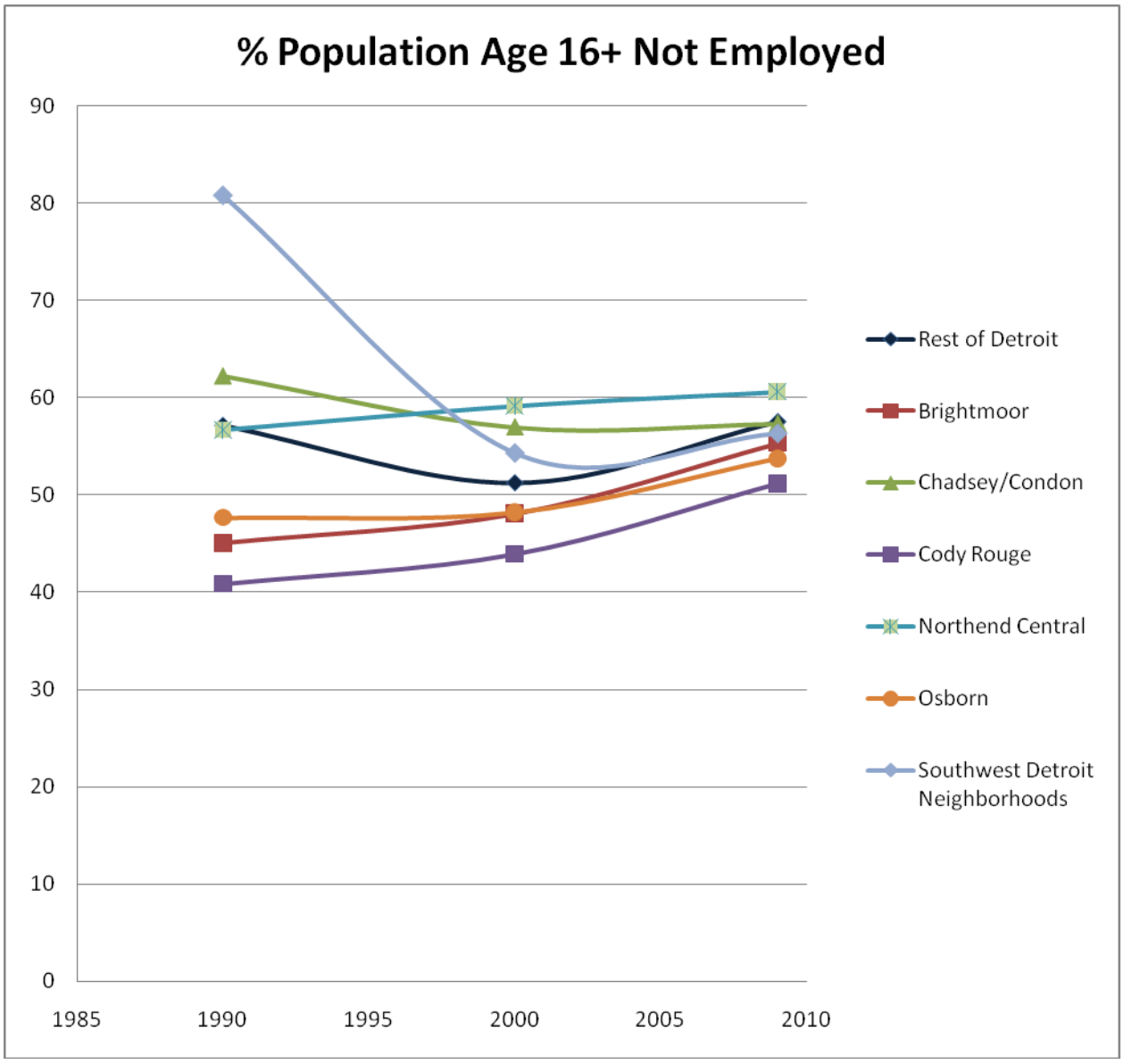

% Population Age 16+ Not Employed
90
80
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 8

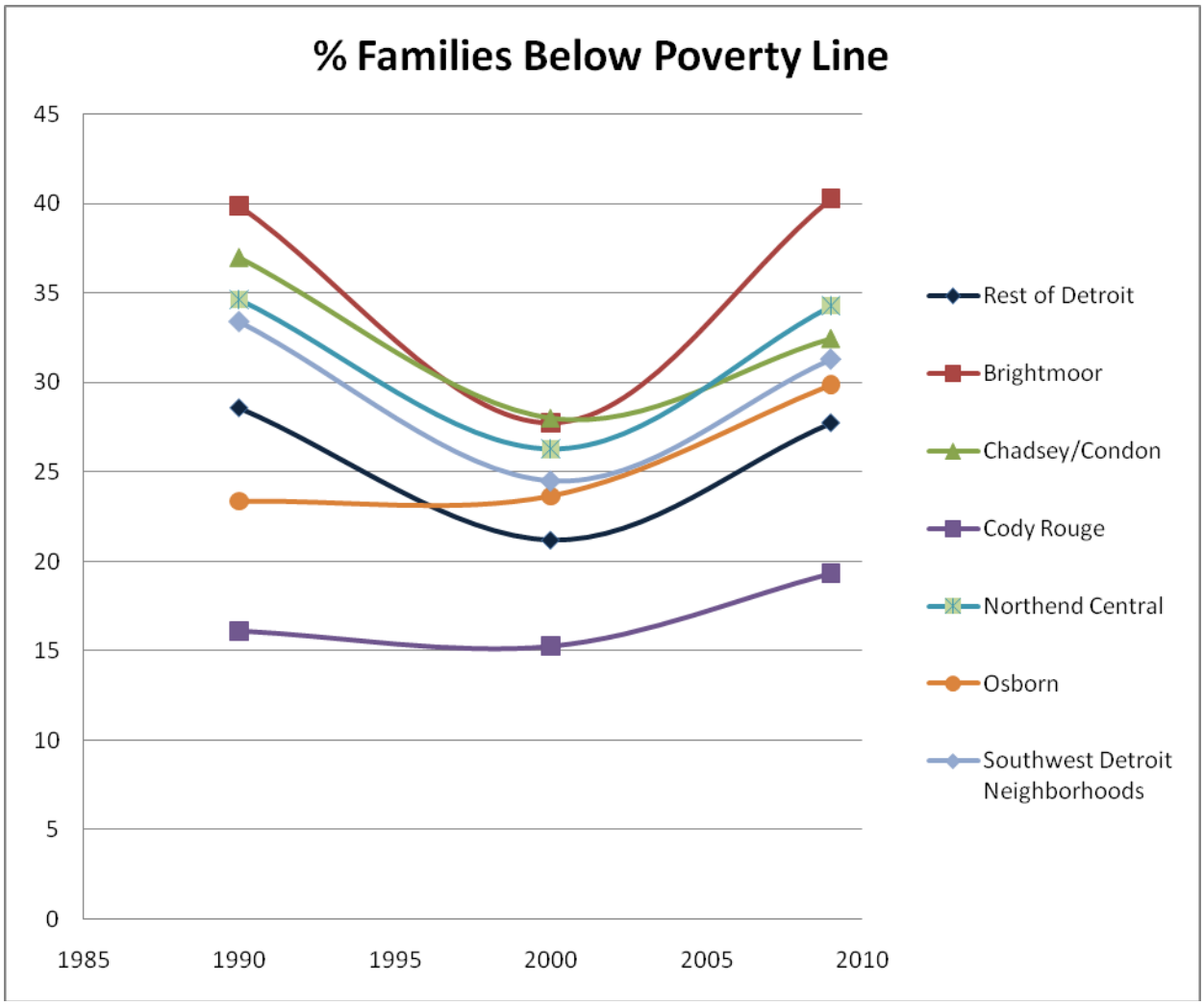

% Families Below Poverty Line
45
40
35
30
25
20
15
10
5
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 9

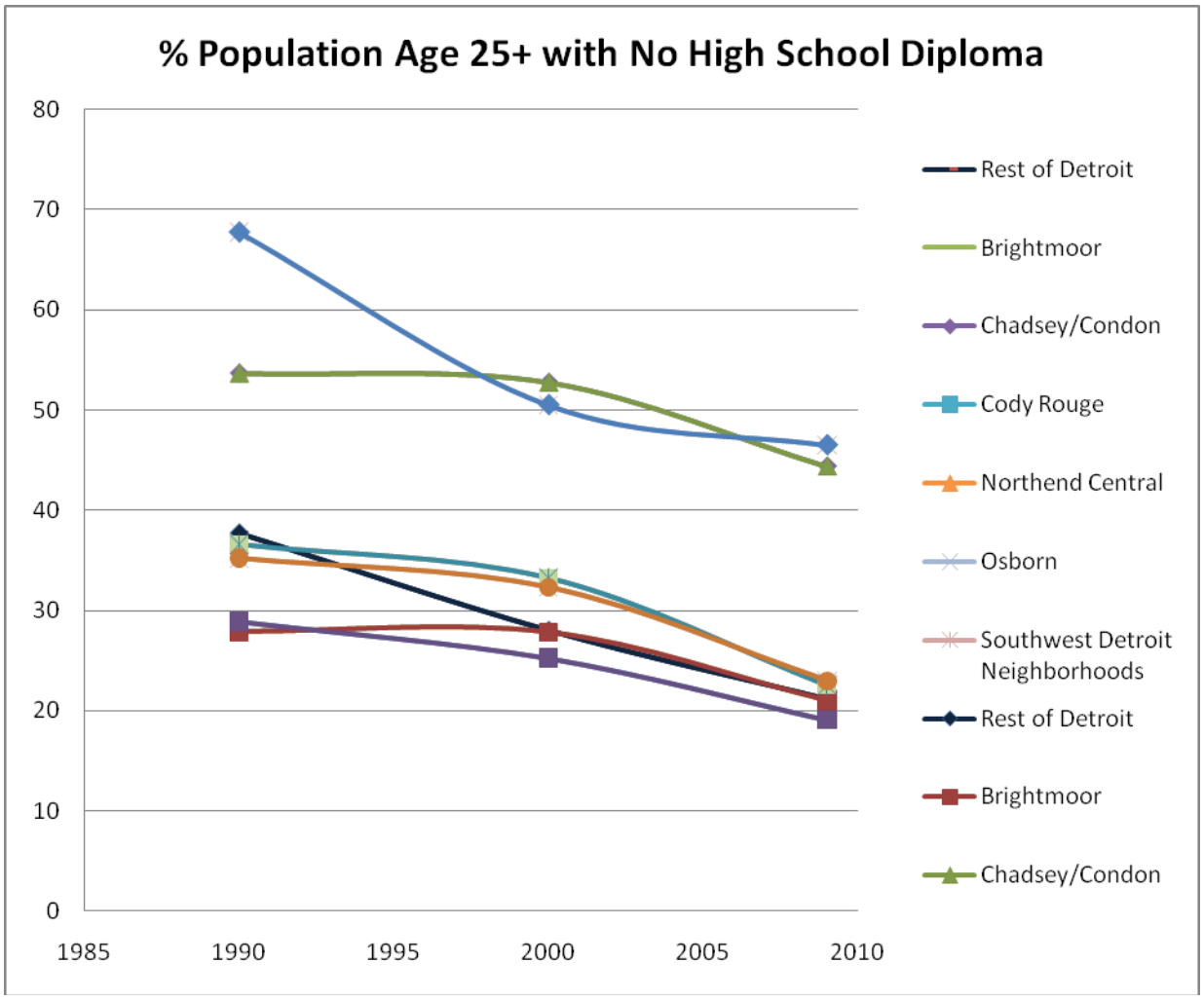

% Population Age 25+ with No High School Diploma
80
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods
Rest of Detroit
Brightmoor
Chadsey/Condon

Figure 10

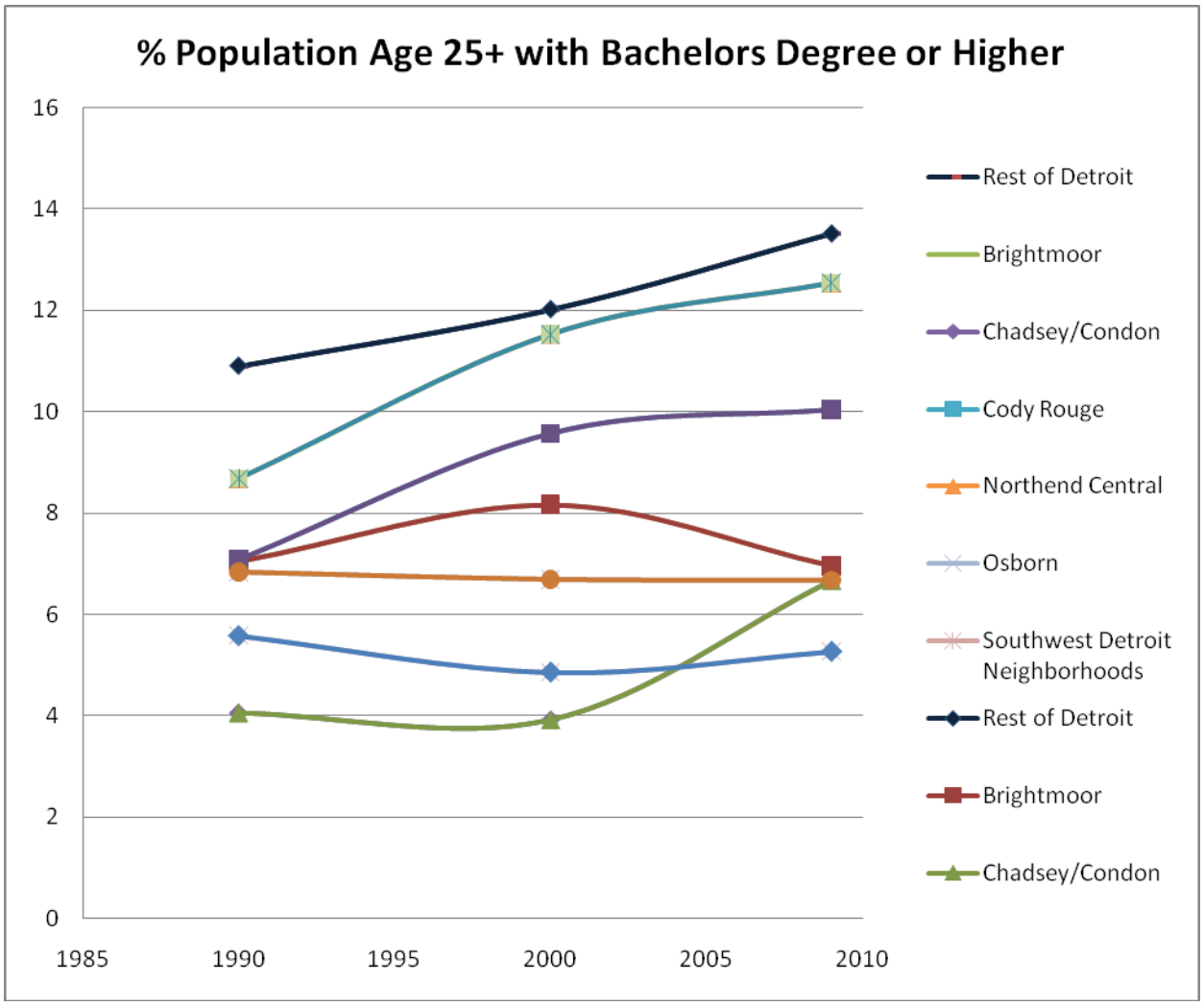

% Population Age 25+ with Bachelors Degree or Higher
16
14
12
10
8
6
4
2
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods
Rest of Detroit
Brightmoor
Chadsey/Condon

Figure 11

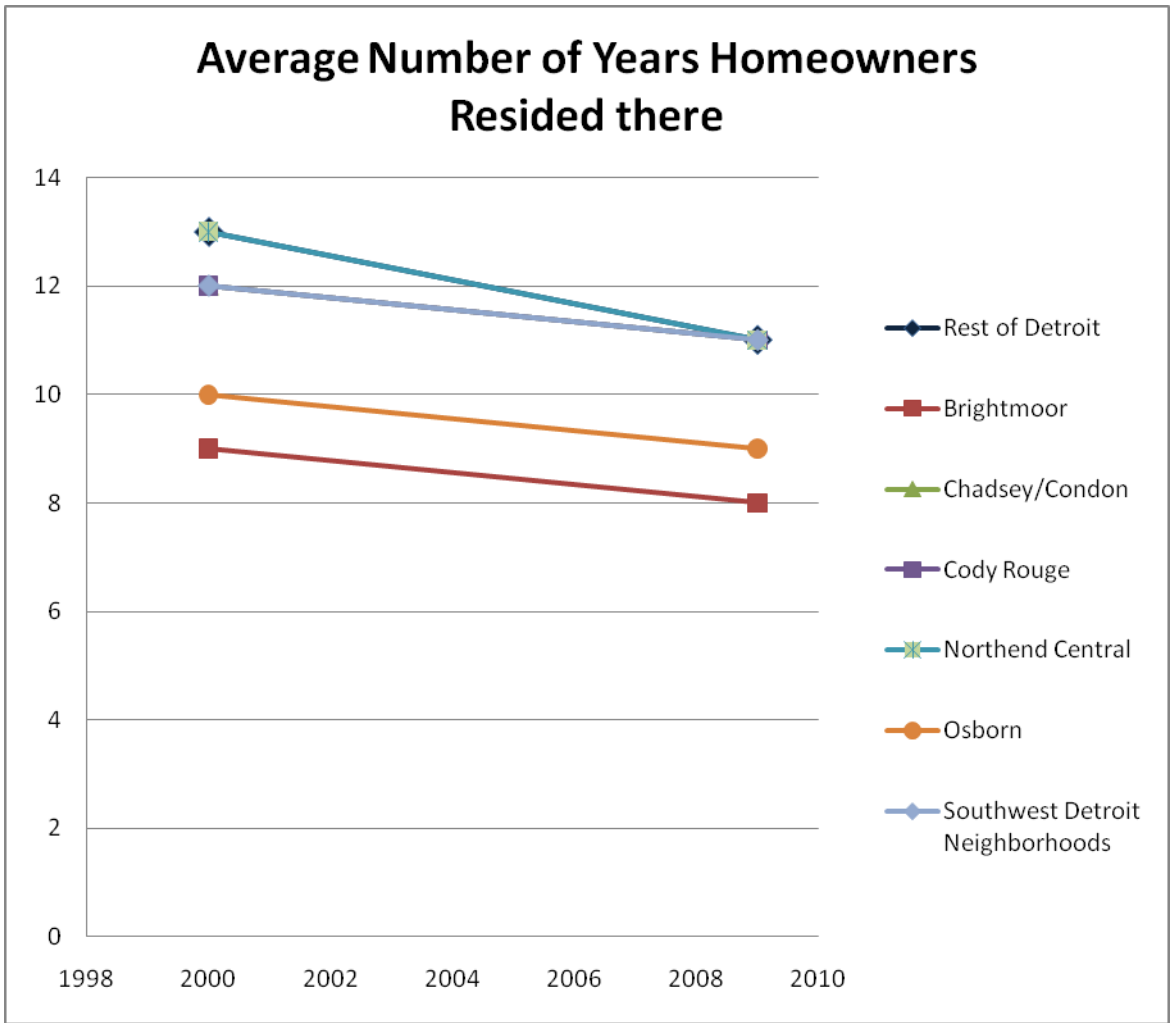

Average Number of Years Homeowners Resided there
14
12
10
8
6
4
2
0
1998
2000
2002
2004
2006
2008
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 12

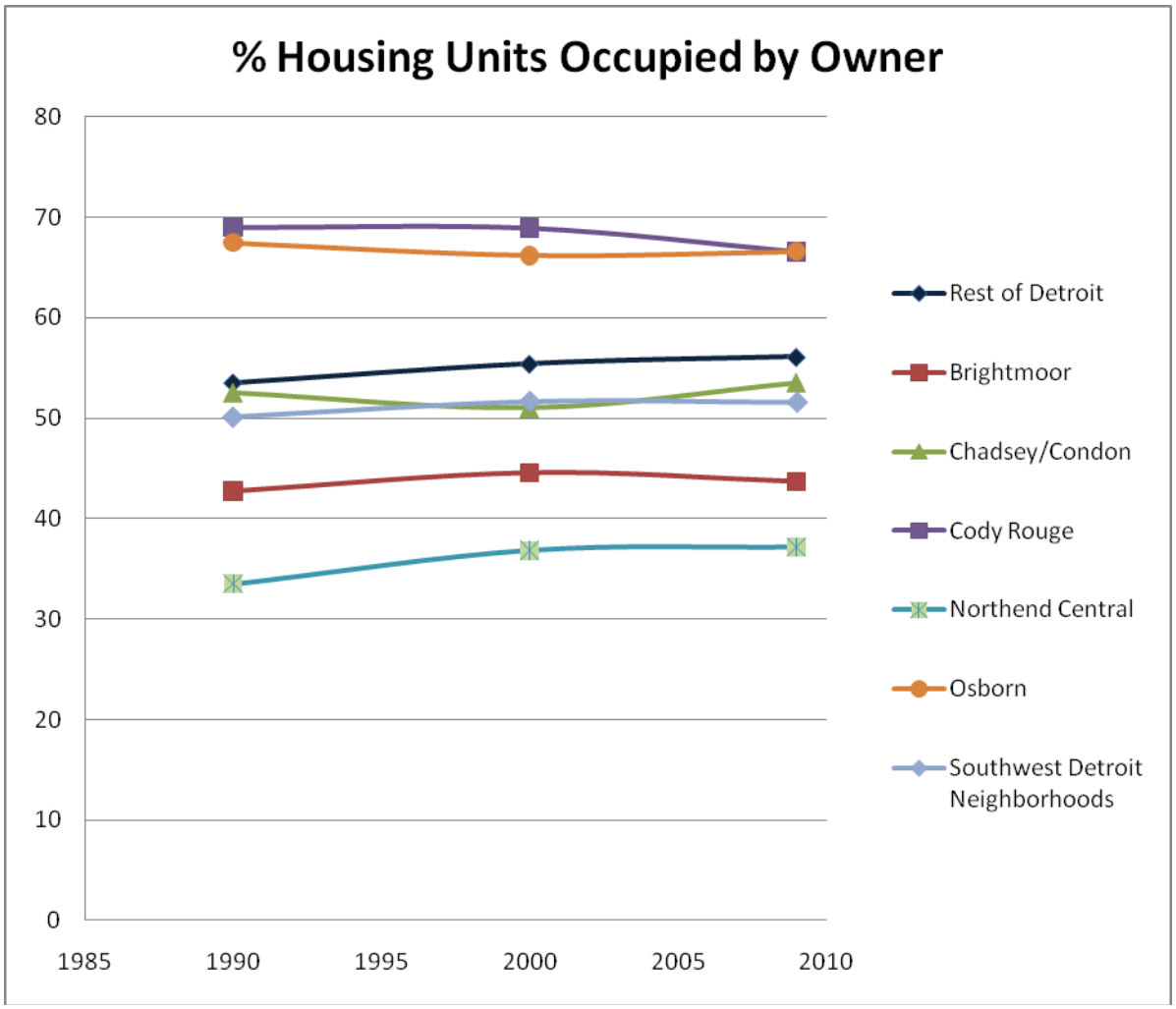

% Housing Units Occupied by Owner
80
70
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 13

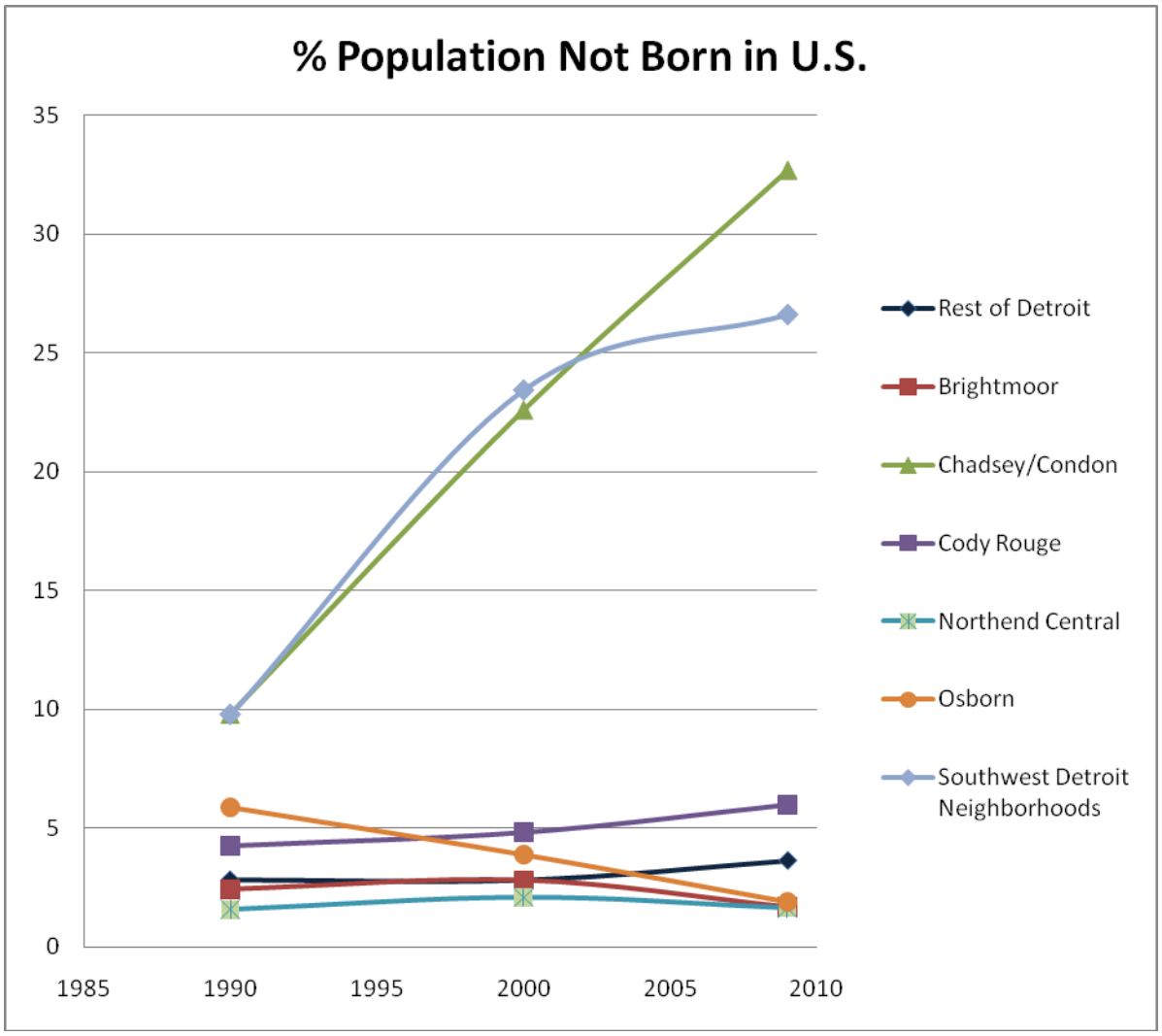

% Population Not Born in U.S.
35
30
25
20
15
10
5
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 14

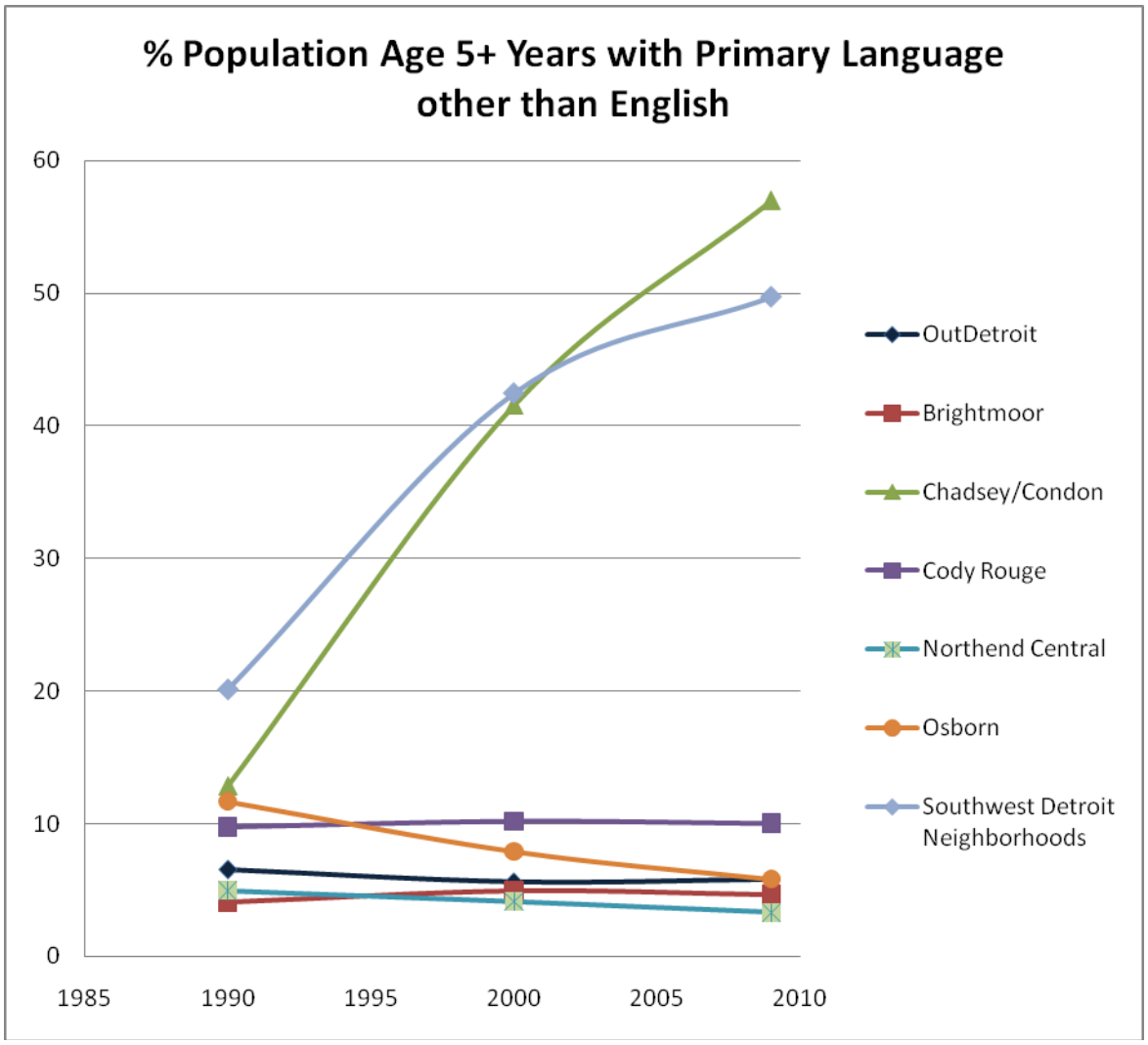

% Population Age 5+ Years with Primary Language other than English
60
50
40
30
20
10
0
1985
1990
1995
2000
2005
2010
OutDetroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 15

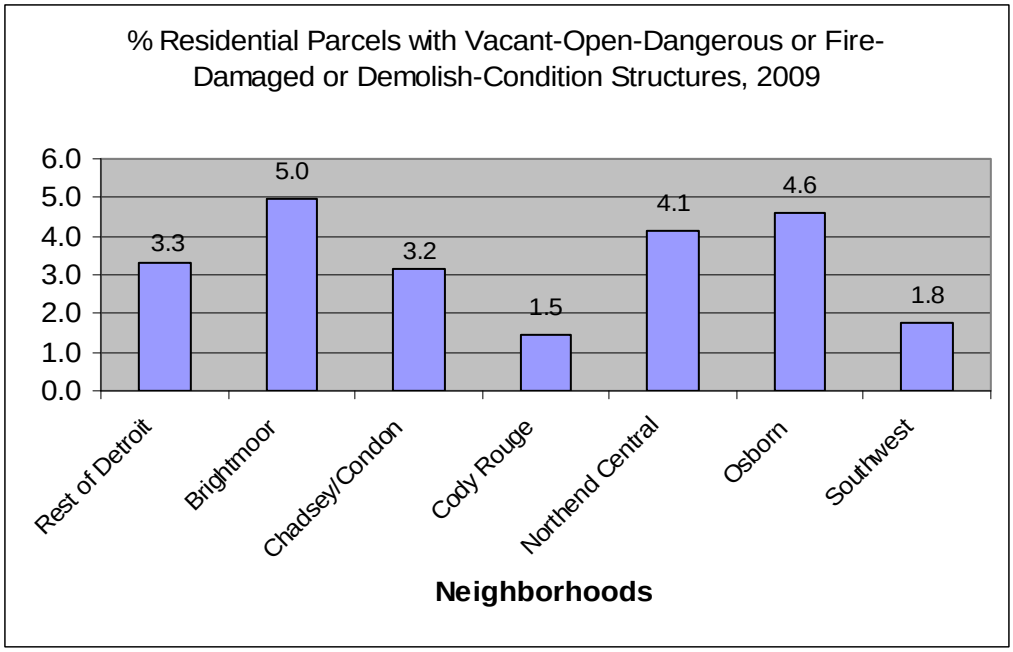

% Residential Parcels with Vacant-Open-Dangerous or Fire-Damaged or Demolish-Condition Structures, 2009
6.0
5.0
4.0
3.0
2.0
1.0
0.0
3.3
5.0
3.2
1.5
4.1
4.6
1.8
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest
Neighborhoods

Figure 16

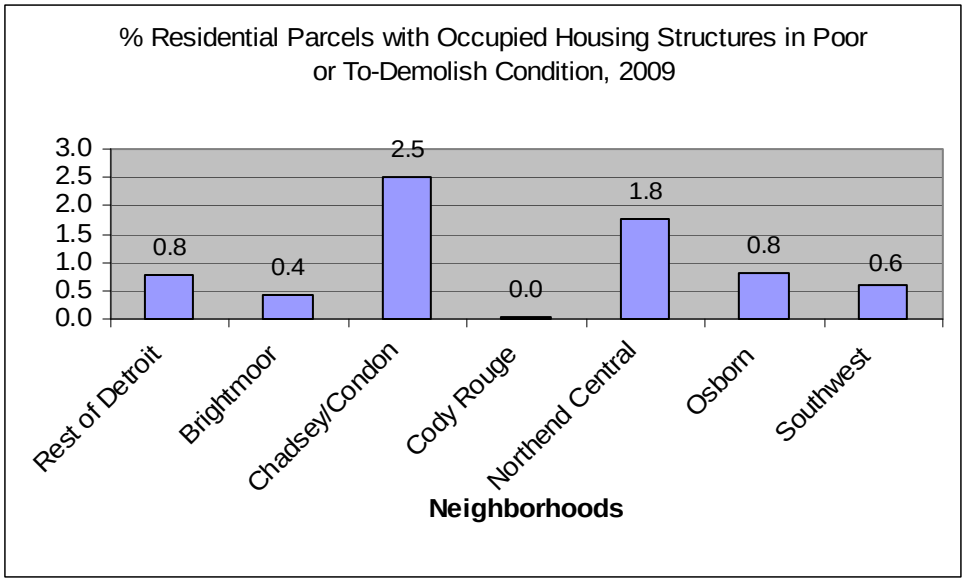

% Residential Parcels with Occupied Housing Structures in Poor or To-Demolish Condition, 2009
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0.8
0.4
2.5
0.0
1.8
0.8
0.6
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest
Neighborhoods

Figure 17

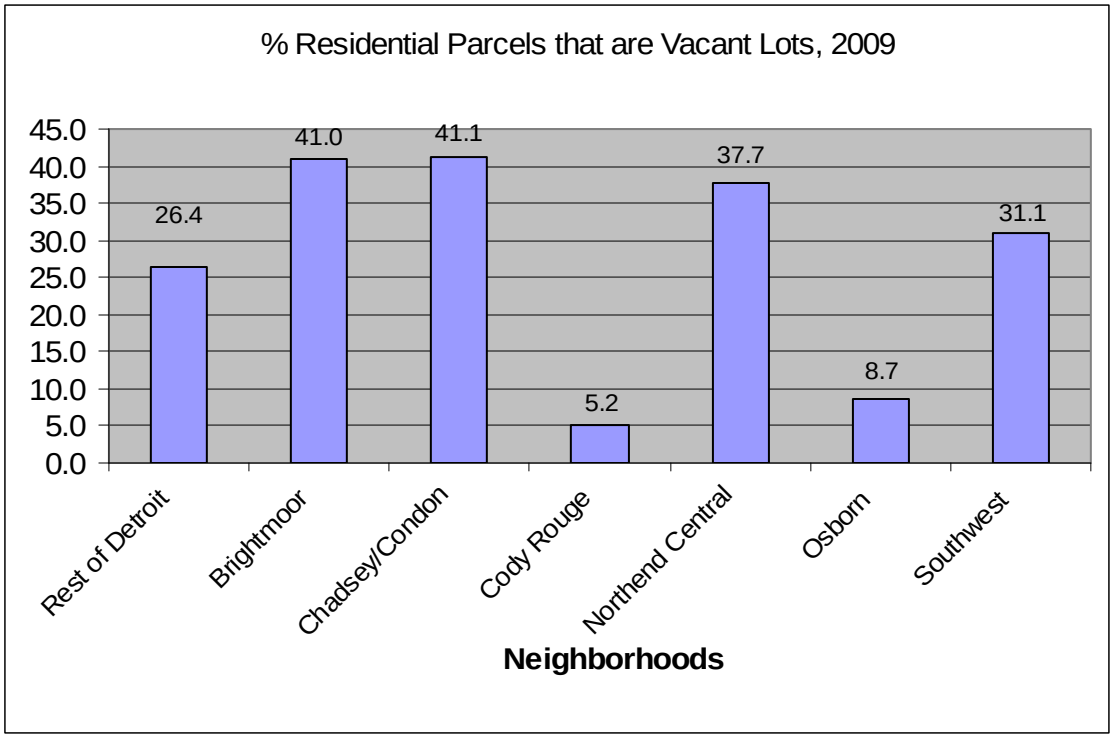

% Residential Parcels that are Vacant Lots, 2009
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
26.4
41.0
41.1
5.2
37.7
8.7
31.1
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest
Neighborhoods

Figure 18

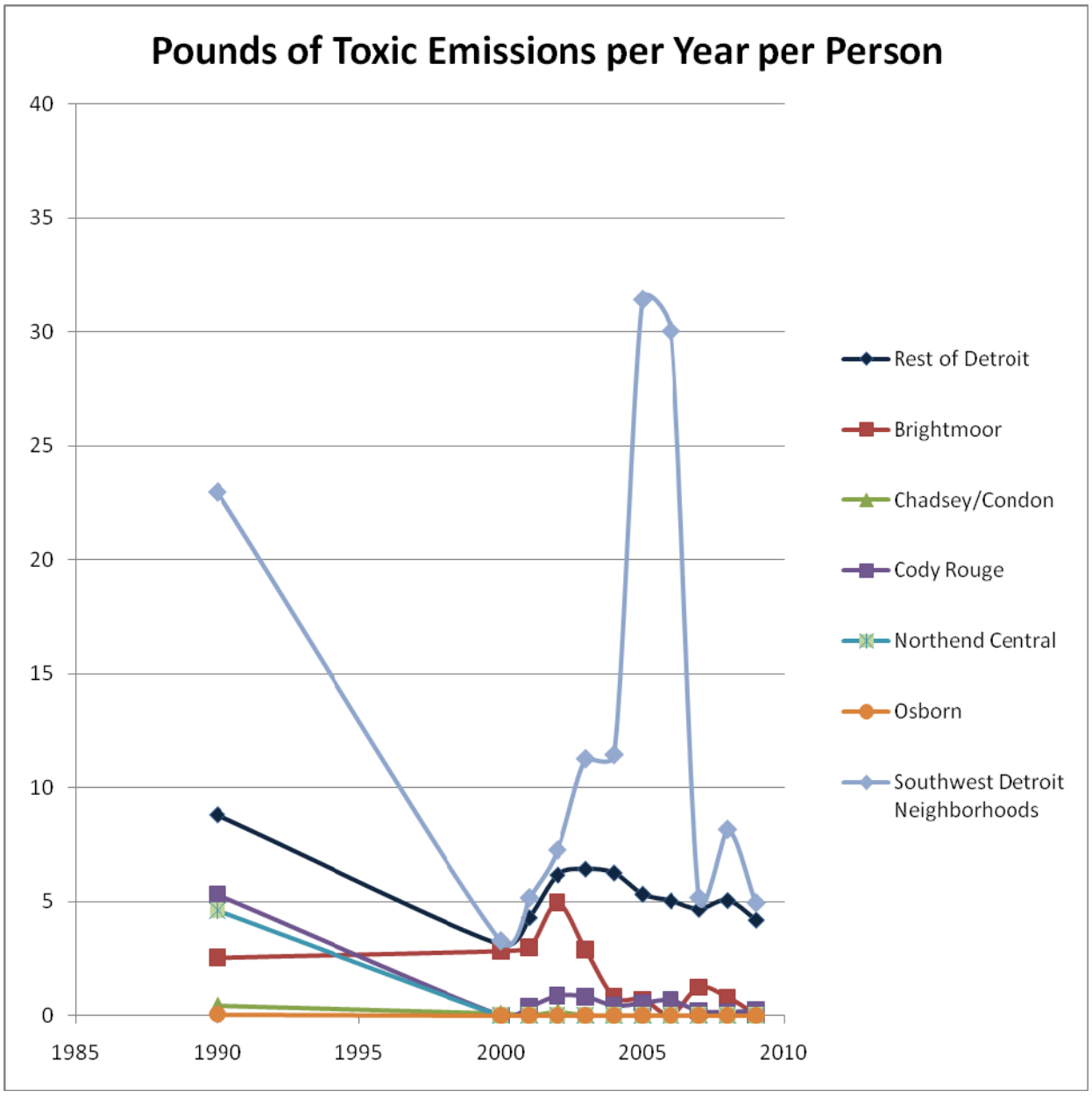

Pounds of Toxic Emissions per Year per Person
40
35
30
25
20
15
10
5
0
1985
1990
1995
2000
2005
2010
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 19

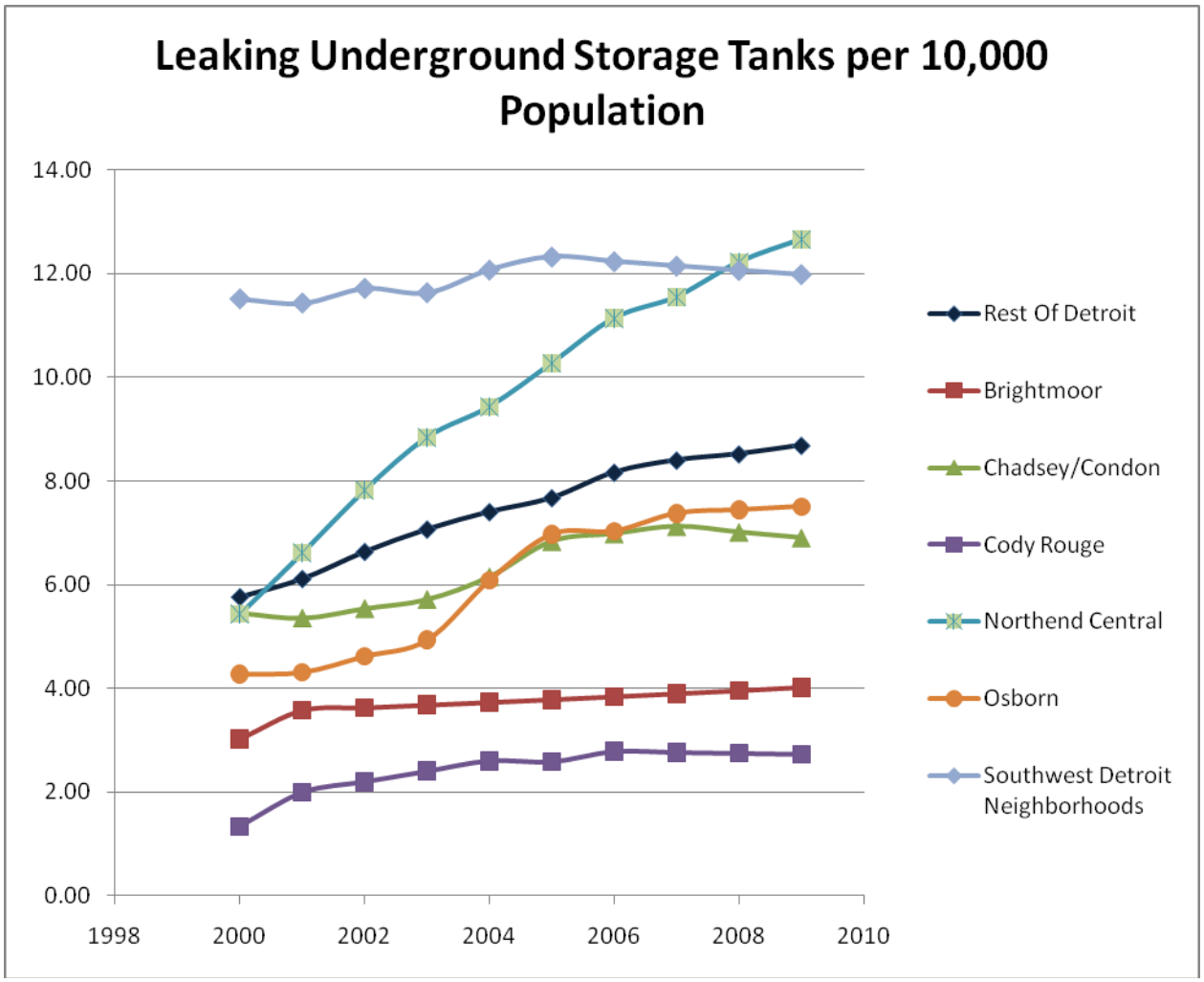

Leaking Underground Storage Tanks per 10,000 Population
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1998
2000
2002
2004
2006
2008
2010
Rest Of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 20

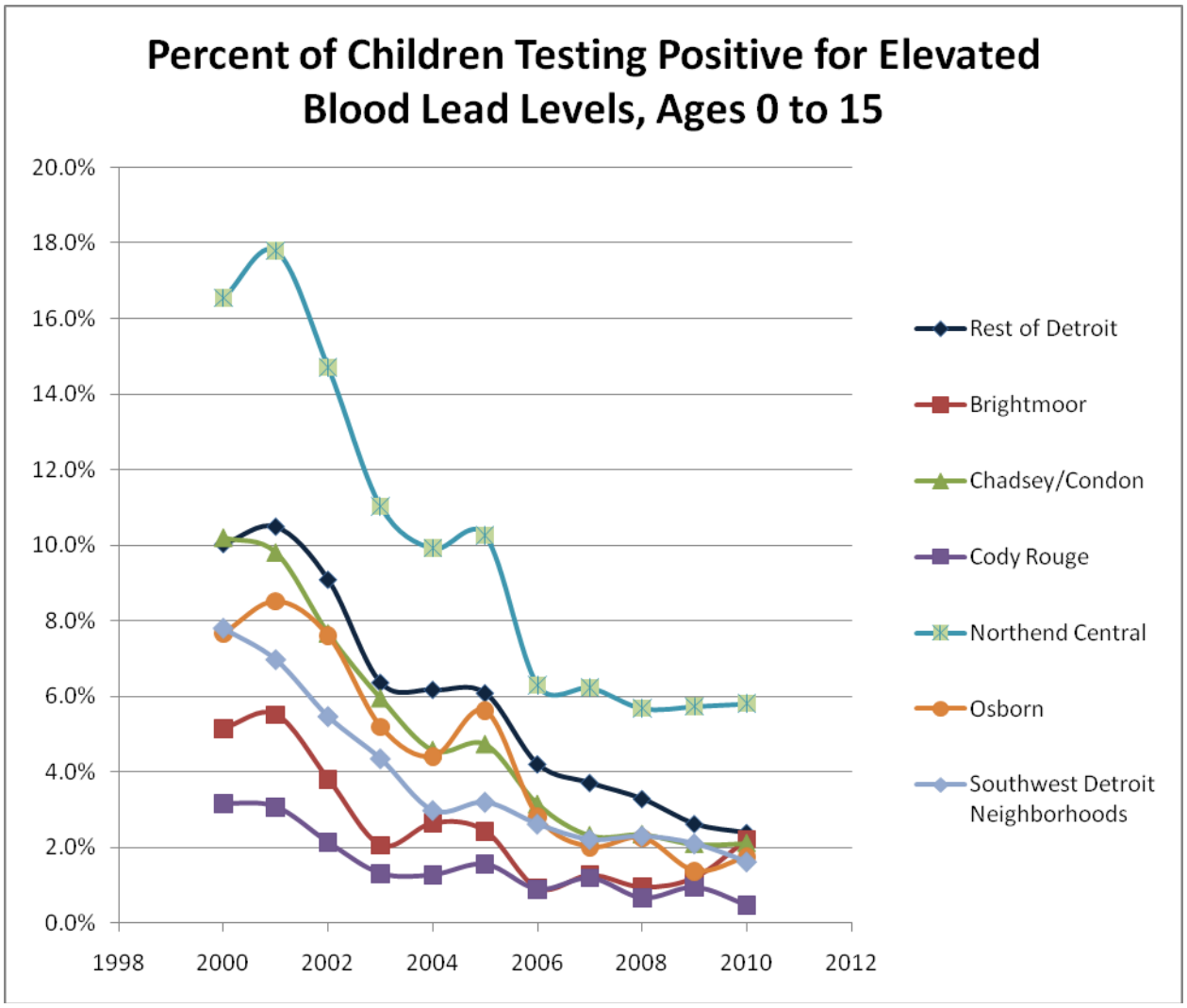

Percent of Children Testing Positive for Elevated Blood Lead Levels, Ages 0 to 15
20.0%
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
1998
2000
2002
2004
2006
2008
2010
2012
Rest of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 21

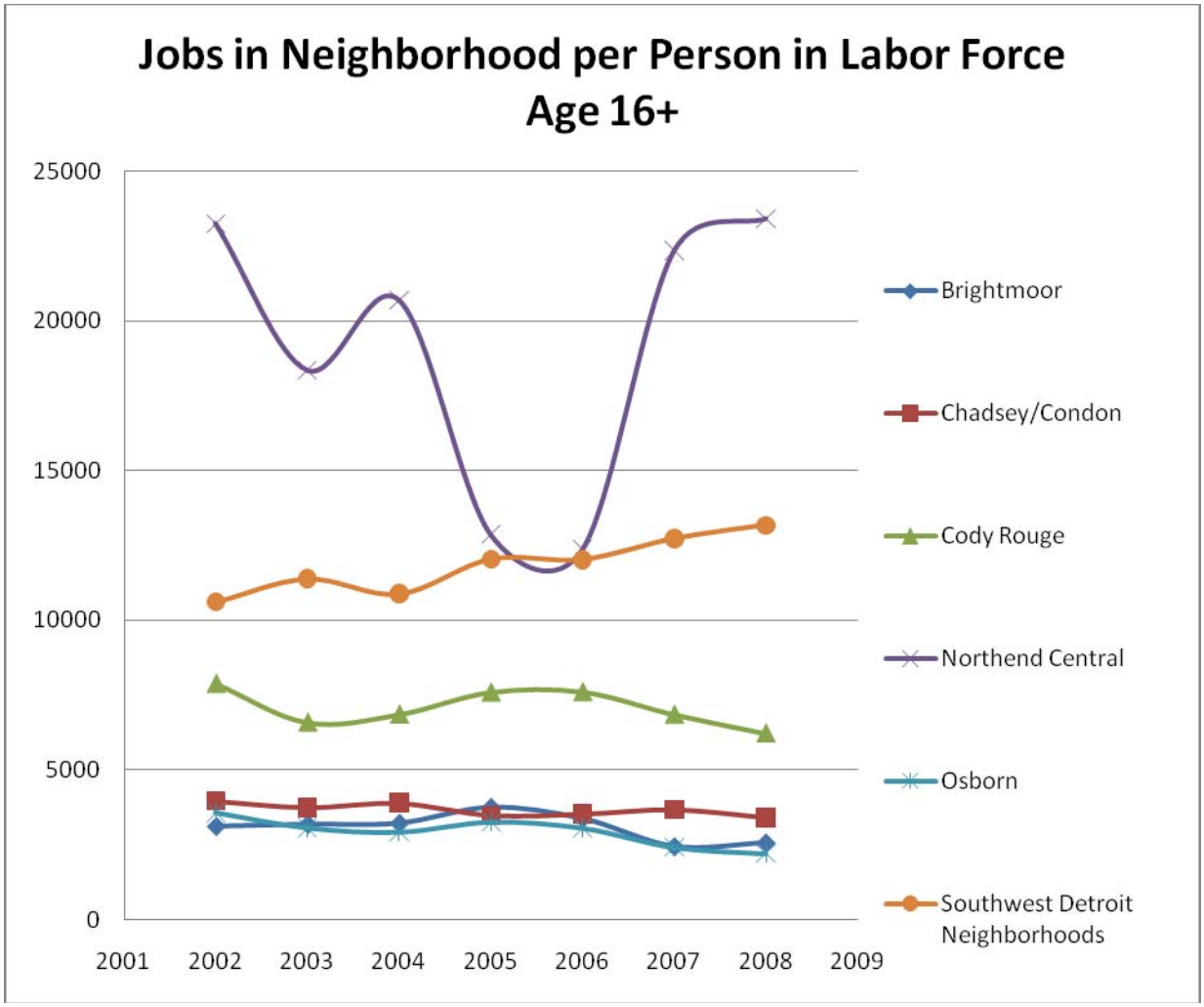

Jobs in Neighborhood per Person in Labor Force Age 16+
25000
20000
15000
10000
5000
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 22

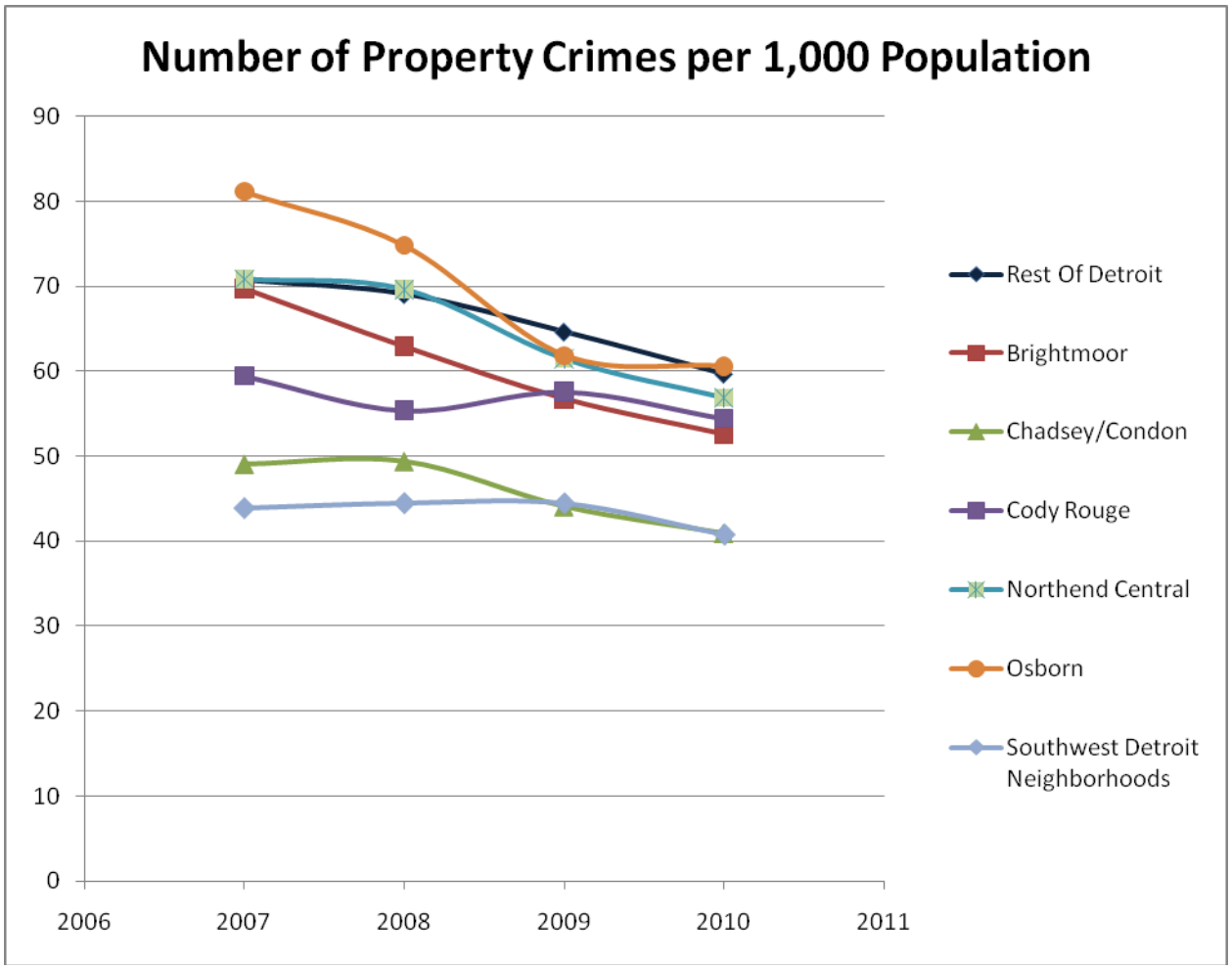
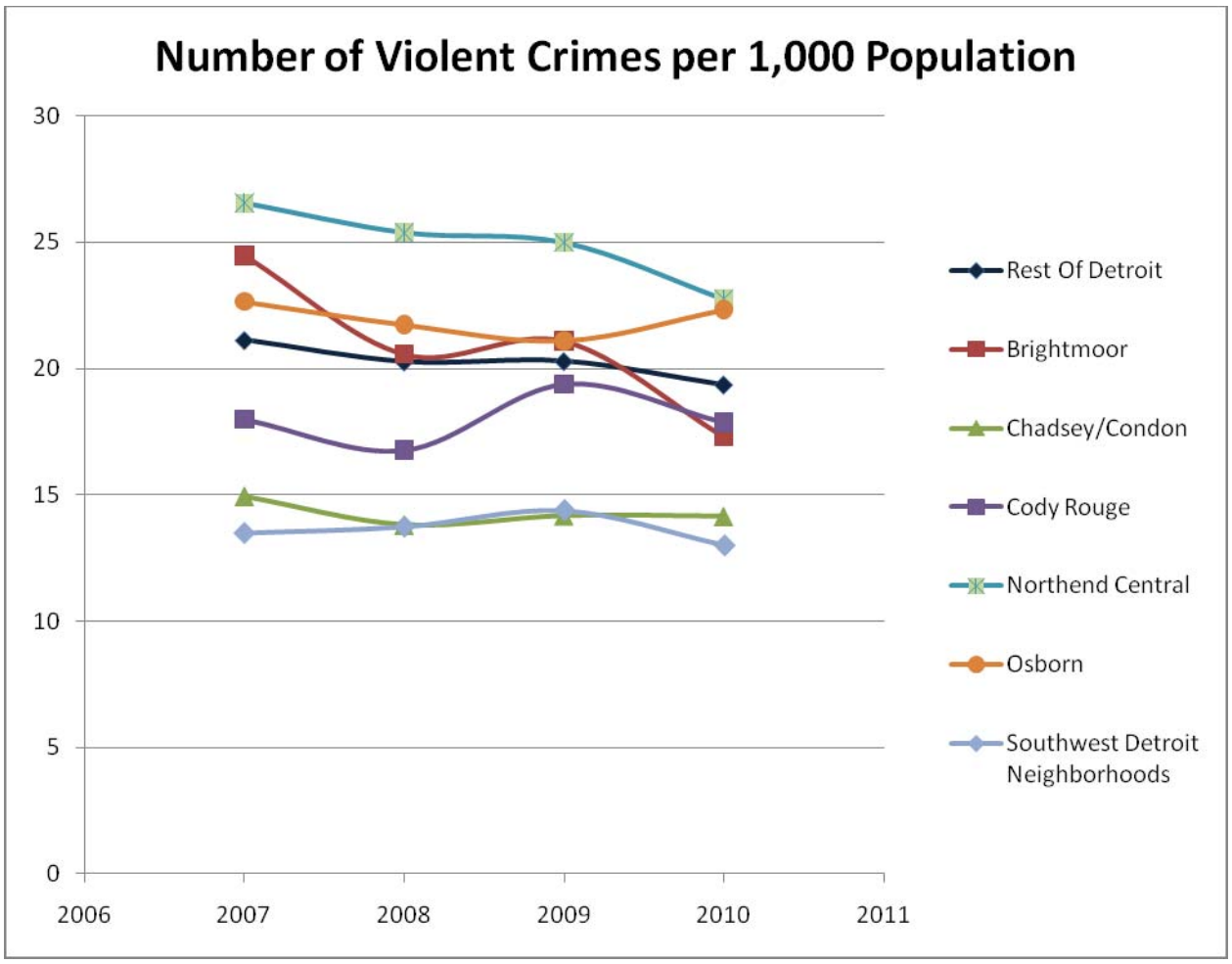

Number of Property Crimes per 1,000 Population
90
80
70
60
50
40
30
20
10
0
2006
2007
2008
2009
2010
2011
Rest Of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods

Figure 23


Number of Violent Crimes per 1,000 Population
30
25
20
15
10
5
0
2006
2007
2008
2009
2010
2011
Rest Of Detroit
Brightmoor
Chadsey/Condon
Cody Rouge
Northend Central
Osborn
Southwest Detroit Neighborhoods