Toward Growth and Equality

A Framework for Monitoring Outcomes for Residents and Housing Markets in Camden and the South Jersey Region

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Overview

In July 2002, the Municipal Rehabilitation and Economic Recovery Act (MRERA) placed Camden, New Jersey, the poorest city in one of the richest states in the country, into receivership. The MRERA also initiated action by local and regional stakeholders, including large-scale redevelopment efforts, neighborhood revitalization projects, and policy initiatives to promote regional equity. Taken together, these efforts address goals both of growth and equality, aimed at expanding economic development and sharing more fully the benefits of development among residents of Camden and the region.

This paper, the second in a series of MDRC publications on the Camden redevelopment experience, offers a framework for understanding change among residents and housing markets in Camden and the South Jersey region. The indicators are identified from census, home mortgage lending, and labor market data and are reported for the 12 years leading up to the MRERA and the first five years afterward.

The report suggests that Camden offers an oasis of homeownership opportunities for low-income households but continues to lose residents overall. Even though poverty declined during the economic expansion of the late 1990s, far too many Camden households struggle to make ends meet. Meanwhile, home mortgage lending patterns suggest that lower-income households purchased more homes in the early to mid-2000s.

In contrast to Camden, outcomes for residents in the South Jersey region were favorable in terms of growth but less so in terms of socioeconomic equality. Despite an increase in total regional employment, the Camden labor force participation rate declined. On the other hand, nonwhite borrowers claimed a growing share of home purchases in the region. The region achieved moderate declines in segregation by race and in segregation by household income, with much room for improvement. However, subprime lending increased sharply in the mid-2000s, and low-income borrowers lost almost their entire share of home purchase capital investments.

The framework in this paper provides a way of understanding the economic gains of the 1990s and also the housing market dynamics of the early 2000s that contributed to the current economic crisis. The framework may also promote a way of understanding the effects of the current recession over time, and the path Camden and its region take toward recovery.

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Introduction

In July 2002, New Jersey Governor James McGreevey signed the Municipal Rehabilitation and Economic Recovery Act (MRERA), which initiated a major redevelopment effort for Camden, one of the poorest cities in the one of the richest states in the country.[1] MRERA appointed a chief operating officer, investing him with substantial statutory powers to hire and fire city officials and, along with an Economic Recovery Board (ERB), to supervise the allocation of $175 million in state redevelopment funds.

Expectations for the nature of redevelopment were as varied as the many problems that became evident at the neighborhood level in Camden, but there were three principal dimensions. The *public redevelopment agenda*, articulated by the MRERA, emphasized municipal reform, economic development, and neighborhood redevelopment for a mix of existing and new residents. These goals were to be accomplished using special, time-limited administrative powers and financial resources. Meanwhile, the philanthropic sector provided financial and technical assistance to organizations advocating for state-level legislation and policies to ensure more coordinated metropolitan growth, taxation, and prosperity; fair access to quality public education; and affordable housing near sectors of employment growth. This set of goals was often referred to as the *regional equity agenda*. Neighborhood community development corporations and other community-based organizations tried to promote incremental, neighborhood-level improvements in affordable housing and main street commercial development in Camden that was responsive to the interests and needs and of local residents. This was referred to as the *neighborhood redevelopment for current residents agenda.*

Each of these three dimensions of redevelopment emphasized growth and equality but to different extents and in different sectors. The *public redevelopment agenda* primarily emphasized growth in the institutional drivers of Camden's labor market — businesses and educational and medical institutions; secondarily, the public dimension aimed to attract and retain a greater number of residents from a broader mix of incomes through neighborhood redevelopment and more effective public services. The *regional equity agenda* aimed to achieve greater equality between Camden and the region by expanding affordable housing opportunities that would lead to greater residential integration by race and income; regionalists argued that these gains in equality would result in gains in employment and would moderate the social dislocations that often accompany the residential concentration of poverty, such as high rates of teen births, a high proportion of children in single-parent households, low educational attainment, joblessness, and high rates of violent crime. The *neighborhood redevelopment for current*

[1]For example, in 2005, Camden was ranked among the poorest cities with 65,000 to 249,999 residents, and in that same year, the State of New Jersey ranked highest among states in median income ($61,672). See Figure 1 and Table 8 in Webster and Bishaw, 2006.

residents agenda emphasized growth in affordable housing, home investment, and employment among current Camden residents.

With support from the Ford Foundation and in partnership with the Reinvestment Fund and the Center for Urban Policy Research at Rutgers University, MDRC has undertaken a multiyear study of the origins, implementation, achievements, and challenges of the redevelopment strategies under way in Camden.

The first publication in this series, *Civic Engagement in Camden, New Jersey: A Baseline Portrait,* examined the difficult challenge of fostering meaningful and effective civic engagement in a complex, state-mandated redevelopment initiative.[2] It described how the redevelopment initiative had been stymied by a legacy of municipal mismanagement, a resulting mistrust of officials by residents, conflict among the various players in the city, and the political pressure of a very short timeline for redevelopment. At the same time, it pointed to a few examples of positive civic engagement in the revitalization process that might offer a framework for future progress.

The third, a forthcoming implementation paper, draws on over 200 interviews with city and ERB administrators, private developers, housing advocates, community-based residents and representatives, and others to determine the capacities associated with more effective redevelopment.[3] It finds that more successful efforts: (1) built on existing strengths and capacities, (2) involved effective participatory processes, (3) limited the use of eminent domain, (4) had the ability to advance legal and technical aspects of development, and (5) were coordinated with state and private actors.

This paper, the second in the series, offers a framework for monitoring outcomes for residents and housing markets in Camden and the South Jersey region relative to a balanced set of redevelopment goals, reflecting the common principles articulated by the MRERA and the major redevelopment agents. Drawing on quantitative data, it offers a discussion of the confluence of demographic, labor, and housing market conditions that defined Camden in the 12 years leading up to the MRERA and the first five years after. This paper cannot offer definitive comment on the outcomes of the many different and often contested and delayed redevelopment interventions. Instead, it offers a framework for tracking the extent to which demographic, labor, and housing market conditions are moving into or out of alignment with a range of redevelopment goals. Its intended contribution is to offer a few common diagnostic indicators or vital signs that can serve as a common point of reference for monitoring the well-being of Camden and the region in the years to come.

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[2]Lake et al., 2007.

[3]Greenberg, Verma, and Seith, 2009.

Organization of This Paper

This paper is organized around a framework of 14 indicators of growth and equality for residents and housing markets in the City of Camden and in the South Jersey region, as listed in Table 1. The second column shows the outcomes that will be measured for Camden's residents and housing markets, reflecting the dual goals of growth and equality. (See Map 1 for an orientation to the City of Camden and the South Jersey, tri-county region.)[4] The third column shows similar outcomes that will be measured for the South Jersey region. While the same ten housing outcomes are measured for Camden and the South Jersey region, the outcomes for residents are specific to each. For Camden, the rate of population decline and number of residents living in poverty serve as indicators of growth and equality, respectively. For the South Jersey region, total employment serves as an indication of growth, while Camden labor force participation rates reflect the degree to which Camden's residents are taking full advantage of this growth.

The first section describes the demographic, labor market, and housing market conditions that served as the impetus for Camden's redevelopment. It introduces each of the redevelopment indicators in greater detail and concludes with an overview of the observation period and data sources for this paper.

The second section describes the outcomes for residents and housing markets in the City of Camden, including changes in population, poverty, home purchase investments, subprime lending, and housing affordability. Because the topic of household segregation by race and income inherently addresses the evenness of household representation in Camden and across the South Jersey region, these findings necessarily serve as a bridge between the second and third sections.

The third section describes outcomes for residents and housing markets in the South Jersey region. For comparisons of some outcomes, such as segregation, employment, and labor force participation, it is important to treat the City of Camden as part of the South Jersey region, for example, when noting the discrepancies between strong regional employment growth and low labor force participation rates in Camden. For other comparisons, such as home purchase trends, housing affordability, and subprime lending, trends for the balance of the South Jersey region are presented in order to draw a contrast with Camden.

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[4]The three counties included in the South Jersey region are Burlington, Camden, and Gloucester. This analysis excludes Philadelphia County, which borders Camden on the west, for three reasons. First, throughout the Camden Regional Equity Demonstration initiative, the Ford Foundation identified the tri-county, South Jersey region as the relevant comparative context with which Camden should be integrated and compared. Second, New Jersey housing markets are more sensitive to the MRERA and similar New Jersey redevelopment law. Third, as shown in Table 2, only 10 percent of Camden residents reported that they worked in another state in 2006, according to the U.S. Census Bureau's American Community Survey.

The Camden Regional Equity Demonstration

Table 1

14 Indicators of Growth and Equality for Residents and Housing Markets in the City of Camden and the South Jersey Region

Characteristic	City of Camden	South Jersey Region
Outcomes for residents		
Growth		
Rate of population decline	*	
Total employment		*
Equality		
Number of residents living in poverty	*	
Camden labor force participation rates[a]		*
Outcomes for housing markets		
Growth		
Private home purchase capital (HPC) investment	*	*
Subprime lending	*	*
Equality		
Private home purchase capital (HPC) investment among borrowers of color	*	*
Approved low-income borrowers as a proportion of all approved home mortgage borrowers	*	*
Broadening of the distribution of home buyers' incomes	*	*
Broadening of the distribution of home purchase prices	*	*
Critical housing affordability needs among low-income renters	*	*
Critical housing affordability needs among low-income homeowners	*	*
Segregation by race/ethnicity	*	*
Segregation by household income	*	*

NOTE: [a]For the South Jersey region, total employment serves as an indication of growth. Camden labor force participation rates, as they reflect the degree to which Camden residents are taking full advantage of this growth, serve as an indicator of equality.

The Context of Redevelopment in Camden

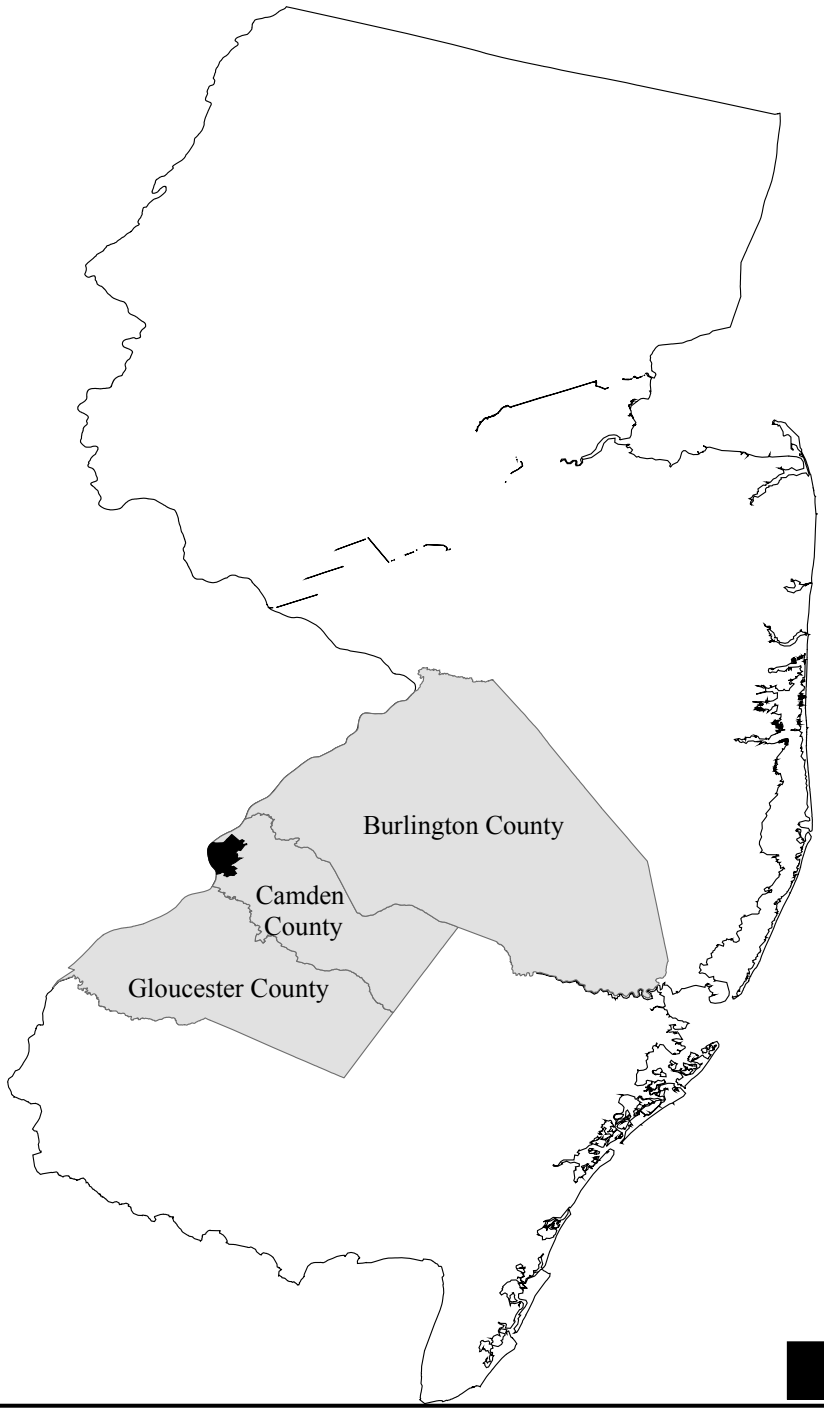
To understand the impetus for redevelopment, it is helpful to note a few of the major demographic, labor, and housing market conditions that defined Camden in the 12 years leading up to the MRERA and the first five years of redevelopment it initiated.

Camden, New Jersey, is among the poorest cities in one of the richest states in America. Indeed, across all U.S. cities with 50,000 to 150,000 residents in 2000, only 72 had poverty

The Camden Regional Equity Demonstration

Map 1

The City of Camden and the South Jersey Region



rates of 20 percent or greater. Four of them were other New Jersey cities — Passaic, Paterson, Trenton, and Union City. Only five of these, in addition to Camden, had poverty rates greater than 30 percent.[5] Camden's poverty rate was 36 percent.

1. Camden's residents are relatively young, less prepared for and less engaged in the workforce, and more likely to be parenting alone.

Table 2 presents some of the defining demographic characteristics of the residents of Camden and of the South Jersey region. Three of the most salient demographic differences point to the vulnerability of Camden's residents in 2006. First, Camden's residents are young. Nearly a third of them are children, compared with about a quarter of South Jersey's residents. Second, Camden's residents are less prepared for and less likely to participate in the workforce. More than 20 percent of Camden's adult residents lack a high school diploma, compared with less than 10 percent of South Jersey's residents. Third, many of Camden's mothers are raising children alone. As shown in Table 3, 27.9 percent of Camden's households with children are headed by a single parent, compared with only 9.2 percent in the South Jersey region.

A recent report from the Housing and Community Development Network's Urban Revitalization Research Project suggests that while many of these disadvantages are not unique to Camden, it is often the most disadvantaged of New Jersey's most distressed municipalities.[6] Camden ranks in the most disadvantaged quintile on several social and demographic indicators — underrepresentation of working-age adults, high rates of teen and unmarried births, a high proportion of children in single-parent households, low educational attainment, low high school completion rates, and high rates of violent crime. Camden also ranks in the most disadvantaged quintile with respect to indicators of economic and fiscal disadvantage — poverty, joblessness, unemployment, and job losses.

2. Camden's housing is relatively old and inexpensive, and residential vacancy is pervasive. Given this slack demand, homeowners can buy houses that they then struggle to afford.

Table 4 presents some of the defining characteristics of Camden's housing stock, homeownership, and residential mobility relative to that of the region. Camden's housing stock is older and relatively affordable. In 2006, the median construction date of Camden's housing was 1947, about a generation older than that of the region (1971). Partially reflecting its age,

[5]MDRC analysis based on the 2000 U.S. Census. The other cities with poverty rates greater than 30 percent were Hartford, CT (30.6 percent), Monroe, LA (32.3 percent), Florence-Graham, CA (35.8 percent), Brownsville, TX (36.0 percent), and College Station, TX (37.4 percent)

[6]Mallach, Frazier, and Sterner, 2006.

The Camden Regional Equity Demonstration

Table 2

Demographic Composition and Labor Force Participation in Camden and the South Jersey Region, 1990, 2000, and 2006

Characteristic	South Jersey Region[a]			City of Camden		
	1990	2000	2006	1990	2000	2006
Population	1,127,972	1,186,999	1,249,659	87,492	79,904	73,838
Age (%)						
Children (ages 0-17)	25.9	26.1	23.9	35.5	34.5	32.0
Adults (ages 18-64)	62.7	61.6	63.9	56.0	58.0	59.9
Seniors (ages 65 and over)	11.3	12.3	12.2	8.4	7.5	8.1
Race/ethnicity (%)						
Hispanic/Latino	4.4	6.1	7.5	28.8	38.6	41.3
Black, non-Hispanic/Latino	13.7	14.4	15.5	54.2	49.3	48.9
White, non-Hispanic/Latino	79.7	74.7	71.2	15.2	7.5	4.4
Asian, non-Hispanic/Latino	1.9	2.9	3.9	1.3	2.9	3.1
Country of birth (%)						
Foreign born	4.3	5.9	8.3	3.9	8.9	12.6
Education and labor force participation (%)						
Percentage without a high school diploma[b]	14.0	10.8	8.8	26.4	26.2	21.9
Total labor force participation rate[c]	80.9	89.6	77.7	69.0	70.6	63.8
Place of work (%)						
Within county	44.7	53.0	52.0	43.8	71.1	63.1
Within state	67.2	81.9	84.2	53.1	89.2	89.7

SOURCES: MDRC calculations from 1990 and 2000 U.S. Census data. 2006 data from the U.S. Census Bureau American Community Survey.

NOTES: [a]South Jersey is defined as Camden, Burlington, and Gloucester Counties. All medians reported for South Jersey are calculated as the average of the medians from the 3 counties.

[b]This measure includes only people 25 years of age or older.

[c]This measure was calculated only for the noninstitutionalized, nondisabled population over the age of 16.

The Camden Regional Equity Demonstration

Table 3

Income and Poverty in Camden and the South Jersey Region, 1990, 2000, and 2006

Characteristic	South Jersey Region[a]			City of Camden		
	1990	2000	2006	1990	2000	2006
Household composition (%)						
Households with children	36.5	35.6	38.0	42.5	43.7	47.4
Single-parent mothers with children	6.1	6.8	9.2	24.9	25.3	27.9
Family income and poverty						
Number of families	296,161	310,492	318,381	19,269	17,655	16,397
Median family income ($)[b]	68,803	73,129	75,305	29,112	28,814	29,125
Families with annual income (%)[c]						
Less than $10,000	5.4	3.6	3.7	30.1	22.2	19.4
$10,000 - $29,000	22.3	14.1	11.0	38.8	36.6	31.2
$30,000 - $49,000	30.3	19.6	14.9	21.2	22.5	21.7
$50,000 - $59,000	12.4	10.3	8.2	4.5	7.0	9.6
$60,000-$99,999	22.8	31.4	29.6	4.7	9.3	14.7
$100,000 or more	6.8	21.0	32.6	0.6	2.5	3.4
Family poverty rate (%)	5.6	5.5	6.3	34.1	32.8	32.3
Individual income and poverty (%)						
Individuals with income						
Below 50% of poverty	3.7	7.8	4.1	25.1	18.6	18.6
Below 100% of poverty	7.6	16.3	8.2	45.7	35.5	35.6
Below 150% of poverty	12.8	27.4	13.4	61.4	50.7	49.2
Below 200% of poverty	19.5	40.4	19.8	75.9	62.4	60.5
Per capita income ($)[b]	25,196	27,924	28,563	11,223	11,491	12,739
Provider ratio						
Ratio of working adults to children	1.9	1.8	1.9	0.9	0.8	1.0

SOURCES: MDRC calculations from 1990 and 2000 U.S. census data. 2006 data from the U.S. Census Bureau American Community Survey.

NOTES: [a]South Jersey is defined as Camden, Burlington, and Gloucester counties. All medians reported for South Jersey are calculated as the average of the medians from the 3 counties.

[b]All dollar values have been normalized to 2006 dollars.

[c]Dollar thresholds for family income are in nominal dollars, not real, inflation-adjusted dollars.

The Camden Regional Equity Demonstration

Table 4

Housing Characteristics in Camden and the South Jersey Region, 1990, 2000, and 2006

Characteristic	South Jersey Region[a]			City of Camden		
	1990	2000	2006	1990	2000	2006
Total number of residential units	415,840	456,044	482,450	30,138	29,769	30,775
Tenure and mobility (%)						
Homeownership	73.5	74.7	76.0	48.5	45.9	44.6
Five-year household mobility	39.4	37.5	7.9	40.6	44.3	4.7
One-year household mobility	5.9	2.4	11.4	7.0	1.2	11.0
Housing costs and affordability ($)[b]						
Median gross rent	836	795	877	639	611	636
Median owner costs						
with mortgage	1,381	1,529	1,758	780	814	853
without mortgage	505	578	699	372	392	438
Housing characteristics						
Vacant (%)	5.2	5.5	6.3	11.7	18.8	21.1
Median year built	1965	1968	1971	1945	1948	1947
Age (%)[c]						
Brand new construction	2.2	1.6	1.4	0.5	0.6	1.8
Other new construction	7.9	5.1	7.0	1.2	1.3	6.3
Other first generation	26.5	20.5	24.7	9.8	5.0	10.2
Second generation	19.2	34.8	31.7	13.7	19.8	13.0
Other postwar	17.1	15.3	14.4	15.9	18.9	12.0
Pre-1950	27.1	22.7	20.9	58.9	54.3	56.7
Size (%)						
Number of bedrooms						
1	12.6	12.5	11.4	17.9	18.3	15.7
2-3	63.1	60.6	61.5	71.4	70.6	77.7
4 or more	23.3	25.4	26.7	6.9	6.6	6.2
Crowded[d]						
Owner-occupied units	1.0	1.2	0.5	4.8	5.6	2.2
Renter-occupied units	1.5	1.8	0.8	9.5	10.8	3.7
Group quarters	2.4	2.5	2.3	4.1	5.4	4.1

(continued)

Table 4 (continued)

SOURCES: MDRC calculations from 1990 and 2000 U.S. census data. 2006 data from the U.S. Census Bureau American Community Survey.

NOTES: [a]South Jersey is defined as Camden, Burlington, and Gloucester counties. All medians reported for South Jersey are calculated as the average of the medians from the 3 counties.

[b]All dollar values have been normalized to 2006 dollars.

[c]Age categories of housing are defined as follows for the year 2000: brand new construction, 1999-March 2000; new construction, 1995-1998; other first generation, 1980-1994; second generation, 1960-1979; and other postwar, 1950-1959. For 1990 data, the housing categories are defined as follows: brand new construction, 1989-1990; new construction, 1985-1988; other first generation, 1970-1984; second generation, 1960-1969; and other postwar, 1950-1959. For 2006 data, the housing categories are defined as follows: brand new construction, 2005-2006; new construction, 2000-2004; other first generation, 1980-1999; second generation, 1960-1979; and other postwar, 1950-1959.

[d]Crowding is defined by the U.S. Department of Housing and Urban Development as more than one person per room.

Camden's housing is also more affordable than that of the region. Median gross rent was 28 percent lower in Camden than in the region in 2006, and median owner costs for houses with a mortgage were less than half as expensive in Camden as in the region in 2006. The most salient difference in the housing stocks of Camden and the region is the *vacancy rate*, which was more than three times higher in Camden (21 percent) than in the region (6 percent) in 2006. Camden's homeownership levels (45 percent) in 2006 were lower than those of the region (76 percent). Nevertheless, it is important to realize that Camden's slack housing market enables low-income residents to own homes at much higher rates than in many urban areas. This raises an important set of questions related to housing affordability and critical housing needs in Camden and the region, discussed in more detail below.

The 14 Indicators in More Detail

This section introduces each of the indicators listed in Table 1 in more detail.

Outcomes for Residents of the City of Camden

- *Reducing the rate of population decline*: Population decline is associated with economic decline, and reduction in the rate of population decline is an obvious indicator, if not of "growth," in the strictest sense, at least of a reduction in long-term economic decline. While historic and continuing segregation by race and income have led many of the region's most disadvantaged residents to seek housing in Camden, decades of out-migration have exacerbated the concentration of poverty among remaining residents. Within this substantially disinvested urban core, population growth from any income stratum helps to repopulate neighborhoods and regenerate economic activity.

- *Reducing the number of residents living in poverty*: Declines in the number of residents living in poverty could be driven by two processes — growth in incomes among poor Camden residents that raises some above the poverty line or changes in the housing market that permit the out-migration of poor residents from areas of concentrated poverty. The latter changes could be produced by the market, such as a reduction in rents in formerly nonpoor neighborhoods, or by increases in affordable housing throughout the region. Beyond the direct benefits for low-income individuals whose incomes and/or housing opportunities might improve, reducing the concentration of poverty might also ameliorate some of its social correlates, such as crime and teen birth rates.

Outcomes for Residents of the South Jersey Region

- *Total employment:* This frameworks traces total quarterly employment as a key indicator of growth affecting residents of the region.

- *Camden labor force participation rates:* While regional job growth is an important indicator of overall economic vitality, the Camden labor force participation rate is an important indicator of the extent to which Camden's residents share in those regional economic gains. Unlike the unemployment rate, which measures adults who are out of work as a proportion of those who are working and those who are seeking work, the denominator of the labor force participation rate also includes adults who are neither working nor seeking work, sometimes referred to as "discouraged workers." Low labor force participation rates, sometimes referred to as "joblessness," are particularly pervasive in neighborhoods of concentrated poverty. Some have argued that concentrated joblessness contributes substantially to concentrated poverty and social distress.[7]

Outcomes for Housing Markets in the City of Camden and in the South Jersey Region

As mentioned above and shown in Table 1, the same set of 10 housing market outcomes are measured for Camden and the South Jersey region.

- *Growth in private home purchase capital (HPC) investment*: The 1975 Federal Home Mortgage Disclosure Act (HMDA) requires banks and other lenders to report the number, approval rates, and amounts of home mortgage

[7]Wilson, 1987, 1996.

loan applications by applicants' characteristics, such as race, sex, and income, and by property location. Economists have demonstrated that these HMDA constructs provide reliable and responsive indications of neighborhood housing markets, as well as the range of neighborhood amenities and negative features that are capitalized in property values.[8] This indicator tracks the growth in the total dollar value of mortgage applications approved for the purchase of homes in the City of Camden. Home purchase investments for primary residences are a robust market indicator of a profound commitment of individual households to a place, and residential neighborhoods live or die based on the aggregate effect of these individual residential investment decisions.

- *Reduction in the number of subprime loans*: In its 2002 review of Regulation C, which governs HMDA reporting, the Federal Reserve Board required lenders to report the spread between the annual percentage rate on a loan and the rate on Treasury securities of comparable maturity whenever those spreads are greater than 3 percent for a first lien or 5 percent for a junior lien.[9] This analysis identifies loans with reported rate spreads at or above these levels as subprime, beginning in 2004, when these regulations took effect. This indicator is of interest for two reasons. First, it identifies borrowers whom lenders have identified as less credit-worthy for the mortgage purchased, which in the aggregate could prove detrimental to the local neighborhood housing market. Second, a subset of subprime lending is predatory, that is, made for the purpose of obtaining the profit of interest from borrowers above and beyond their long-term ability to pay, which often hurts borrowers and neighborhoods by stripping equity from homes, reducing their market value, and leading to foreclosure.

- *Increase in HPC investments among people of color*: The homeownership rate among black (45 percent), Hispanic (41 percent), and Asian (44 percent) residents of Camden is much lower than that among white residents (67 percent).[10] Growth in home purchase investments among people of color represents a form of enfranchisement among subgroups of Camden residents who have historically been unlikely to own homes, as well as a commitment to invest in Camden.

[8]Galster, Hayes, and Johnson, 2005; Palmquist, 1992; Grieson and White, 1989; Bartik, 1988; Polinsky and Shavell, 1976.

[9]Avery, Canner, and Cook, 2005.

[10]MDRC analysis based on 2000 census data.

- *Increase in the proportion of approved home mortgages going to low-income borrowers:* Similarly, although households with annual incomes of $35,000 or less made up 67 percent of Camden's households in 2000, they made up less than 53 percent of Camden's homeowners.[11] Growth in home purchase investments among low-income households is, at best, a mixed signal. In some cases, it might reflect financial well-being and sound investments among low-income households or stronger demand among low-income households for housing in a particular neighborhood, perhaps because they are priced out elsewhere. But it could also reflect increases in subprime lending, with the attendant problems mentioned above.

- *Broadening of the distribution of home buyers' incomes:* One common concern in the context of Camden's redevelopment was how flows of new home purchases would change neighborhood income distribution. Some proponents of redevelopment wanted to attract home buyers from a wider range of incomes. Others were concerned that if the distribution of home buyers' incomes shifted too high, it might drive up competition and prices for local housing. HMDA data allow observers to track the actual distributions of home buyers' incomes over time. Thus, while increases in the total volume of private HPC is one of the key indicators of housing market growth, broadening of the distribution of home buyers' incomes serves as an important measure of equality.

- *Broadening of the distribution of home purchase prices:* Similarly, HMDA data also allow observers to track broadening in the distribution of home mortgage amounts, a proxy for purchase prices.[12] As above, broadening of the distribution of home purchase prices, with more affordable options in the region and some expensive options in Camden, serves as an indicator of equality.

- *Reduction in critical housing affordability needs among low-income renters:* One common indicator of critical housing needs is the proportion of poor households who spend a disproportionate share of their monthly incomes on housing. The U.S. Department of Housing and Urban Development charac-

[11]MDRC analysis based on 2000 census data.

[12]Unfortunately, since indicators that distinguish primary from secondary liens were not provided in public HMDA files until 2004, this report treats all mortgages as proxies for home purchase prices.

terizes households whose housing costs represent 30 percent or more of their household income as bearing rent burdens.[13]

- *Reduction in critical housing affordability needs among low-income homeowners:* As defined for renters above, this indicator tracks the proportion of low-income homeowners who bear moderate cost burdens. Many homeowners struggle to afford their monthly mortgage payments, insurance, taxes, and utilities. This has been particularly the case since the housing bubble of the early 2000s, when historically low interest rates and generous credit terms enabled many low-income people to purchase homes they subsequently struggled to afford.

- *Reduction in segregation by race/ethnicity:* Sociologists have tracked indices of segregation for several decades, primarily to assess the degree of housing opportunities for minority families. A secondary concern is that neighborhood institutions (for example, public schools) and informal social networks serve as important mediators of skills, information, and opportunities, as well as sources of role models and informal support for young adults. One of the explicit goals of the regional redevelopment strategy for Camden was to ameliorate segregation by race, ethnicity, and income.[14]

- *Reduction in segregation by household income:* Several policy analysts have shared the concern that as civil rights legislation opened housing opportunities to middle-income families of color, the social disadvantages of households "left behind" in poor, urban neighborhoods were compounded.[15] Reflecting this concern, this indicator tracks segregation by household income separately from segregation by race/ethnicity.

Although there are several dimensions of segregation, one of the most common approaches is to assess the extent to which the residential distribution of households by race or income differs from "evenness."[16] A group is considered evenly distributed throughout an area when each neighborhood has the same proportion of group members as the metropolitan area as a whole. Table 5 introduces the five measures employed in this paper. See Appendix A for formal definitions of the five segregation indices.

[13]Housing costs of 50 percent or more of household income are characterized as severe rent burdens (U.S. Department of Housing and Urban Development, 2007).

[14]Rusk, 2005.

[15]Wilson, 1987, 1996.

[16]See Massey and Denton, 1988, for an empirical review of the best measures for assessing five different dimensions of segregation.

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Table 5

Interpretation, Advantages, and Disadvantages of Five Segregation Indices

	Measures	Range and Interpretation	Advantages and Disadvantages
E score[a]	Diversity	**Lowest Score (0)**: One or more of the groups may be poorly represented in many tracts; groups tend to reside in separate, homogenous ethnic enclaves. **Highest Score (log (number of groups))**: Each of the groups makes up an equal proportion of all tracts (Optimal).	**Strengths**: Useful for gauging the absolute representation of multiple groups relative to an ideal representation. Useful for cross-site comparisons of absolute diversity. **Limitations**: Does not take into account the actual existence and representation of the groups within the larger area. Does not explicitly take "segregation/integration" by neighborhood into account. Weights all tracts equally, irrespective of population. Sensitive to the absolute and relative size of the groups (that is, neither size nor compositionally invariant). Relatively insensitive to representation between 10 and 80 percent.
H index[b]	Segregation	**Lowest Score (0)**: Existing members of each of the groups are equally distributed across neighborhoods (Optimal). **Highest Score (1)**: Existing members of each of the groups live in separate, homogenous enclaves.	**Strengths:** Corrects for several of the disadvantages of the E Score, that is, takes the existing population distribution of the larger region into account by evaluating each tract's population-weighted contribution/detraction to/from regional diversity; directly addresses segregation by neighborhood; satisfies principles of size and compositional invariance. **Limitations:** Appropriate for categorical comparisons. Best used in combination with the E score to assess both diversity and segregation.
D index[c]	Segregation	**Lowest Score (0)**: None of the existing residents would need to move to establish a perfectly "even" distribution of both groups across neighborhoods (Optimal). **Highest Score (1)**: All of the existing residents would need to move to establish a perfectly "even" distribution of both groups across neighborhoods.	**Strengths:** Intuitive interpretation. Easy to calculate. Has currency as one of the most common and long-standing measures of segregation and correlates well with a number of more sophisticated measures. **Limitations:** Limited to two-group, categorical comparisons. Fails to satisfy the principle of compositional invariance. Often misinterpreted to equate evenness with fairness and, conversely, unevenness with segregation, despite the fact that most random distributions would not be even and one of all possible random distributions would. Best used in combination with the E score to assess both diversity and segregation.

(continued)

Table 5 (continued)

	Measures	Range and Interpretation	Advantages and Disadvantages
P* index[d]	Interaction	**Lowest Score (0)**: There is a zero percent probability that randomly selected members of the two groups share a neighborhood of residence. **Highest Score (100)**: There is a 100 percent probability that randomly selected members of the two groups share a tract of residence.	**Strengths:** Provides an intuitively appealing measure of the average likelihood that members of two groups share a neighborhood. **Limitations:** As a measure of the probability of interaction between two or more groups, however, the P* index is inherently sensitive to the relative size of the two groups. The P* index is also asymmetric, which requires analysts to be clear about the interaction from the perspective of one of the groups.
G_s[e]	Segregation	**Lowest Score (0)**: None of the difference in average household income among neighborhoods is explained by differences in the sorting of households from one neighborhood to another. In other words, household incomes within each neighborhood reflect the mix of household incomes found in the metropolitan region (Optimal). **Highest Score (1)**: All of the difference in average household income among neighborhoods is explained by differences in the sorting of households from one neighborhood to another. For example, all households with incomes of $50,000 live in the same neighborhood.	**Strengths:** Appropriate for a continuous, interval level-attribute, like household income. One of the only indices that satisfies the principles of transfers, compositional invariance, size invariance, and organizational equivalence. **Limitations:** Typical data constraints require analysts to interpolate individual household incomes. Best used in combination with the E score to assess both diversity and segregation.

SOURCES: Iceland, 2004; Jargowsky, 1997; Kim and Jargowsky, 2005; Massey and Denton, 1988.

NOTES: See appendix for explanation of all scores and indices.

[a] Computed using the Multigroup Nominal Entropy Score (E score).

[b] Computed using the Multigroup Nominal Entropy Index (H index).

[c] Computed using the Dissimilarity Index (D index).

[d] Computed using the Interaction Index (P* index).

[e] Computed using the Gini Index of Segregation (G_s).

First, the *Multigroup Nominal Entropy Score* (E score) helps to gauge the diversity of neighborhood representation of two or more categorically defined populations, such as ethnic groups or household income classes. The E score is useful for comparing the existing level of diversity against the ideal, or most equitable, distribution. E ranges from a minimum of 0, when the area is entirely comprised of one of the groups, to a maximum of the log of the number of subgroups (the optimal score), when each of the constituent groups is equally represented.

Second, the *Multigroup Nominal Entropy Index (H index)* is employed to gauge the extent to which Hispanic, black, white, and Asian residents of Camden and the South Jersey region are evenly distributed across neighborhoods (census tracts) relative to their proportion of the larger area's (that is, the city's or the region's) population.[17] The H index ranges from 0, when residents of the four major ethnic groups cluster in separate, homogenous tracts, to 1 when they are evenly distributed across tracts. (Unlike most of the other indices presented, 1 is the maximum score for the H index, reflecting complete integration, while 0 suggests complete segregation.)

Third, this paper employs the *Dissimilarity Index (D index)* to measure the extent of economic segregation of black from white households and of poor from nonpoor households. The D index ranges from 0, indicating complete integration, to 100 for complete segregation. One of the advantages of the D index is its ease of interpretation. Typically employed for two-group comparisons, the D index can be interpreted as the sum of the proportions of residents in both groups that would need to relocate in order to achieve an equal geographic distribution of the two groups.

Fourth, the *Interaction Index (P* index)* measures the probability that randomly selected members of two groups will share the same neighborhood.[18] This index also ranges between 0 and 100, with higher values indicating a higher degree of interaction.

Fifth, to measure neighborhood segregation by household income, this paper employs the *Gini Index of Segregation (G_s)*. The Gini Coefficient of Income Inequality (G_i) is often used to measure the equality of the income distribution across households. Essentially, the Gini Coefficient measures the discrepancy between the existing income distribution and a perfectly equal distribution of income across all households.[19] The G_s, however, measures the extent to

[17]The H index is often cited as the best single measure of segregation among multiple groups. It satisfies the "transfers principle," and can be meaningfully decomposed into its component parts. See Iceland, 2004, and Massey and Denton, 1988.

[18]Massey and Eggers, 1993.

[19]The Gini Coefficient is widely recognized as one of the best available measures of the distribution of a continuous, interval-level attribute like income, and one of the only indices that satisfies the principles of transfers, compositional invariance, size invariance, and organizational equivalence. See Kim and Jargowsky, 2005, and Massey and Denton, 1988.

which the variation in average income *among neighborhoods* helps to explain the variation *between households*. If households were assigned to neighborhoods on the basis of income, such that every household with an income of $50,000 lived in one neighborhood and every household with an income of $30,000 lived in another neighborhood, for example, the G_s would be equal to 1, suggesting complete segregation.

Observation Period and Data Sources

Observation Period

As mentioned above, this paper describes the baseline demographic, labor, and housing market conditions that defined Camden in the 12 years leading up to the MRERA (1990-2002) and the first five years of redevelopment it initiated (2002-2006). Table 6 illustrates the alignment of this observation period with several key, early redevelopment events.

As discussed in other reports, the first five years of redevelopment were characterized by several key plans and a few municipal reforms and promising institutional expansions. The MRERA was signed into law in 2002. Within two years, the city subcontracted with a private firm to service 7,500 tax delinquent liens, and state legislation established the Tax Lien Financing Corporation, although the corporation did not exercise its authority for several years. Also within a year, the ERB completed four major planning documents, setting the agenda for municipal management, infrastructure, and other redevelopment projects. By the end of the official redevelopment period in 2006, the city council approved redevelopment plans for 12 of the city's 21 neighborhoods; the city made significant progress in collecting back taxes; and three major hospital projects were completed.

Nevertheless, the first five years were also characterized by contention, litigation, and administrative turnover. By 2006, a Superior Court had overturned the most ambitious neighborhood redevelopment plan for Cramer Hill. The governor who signed the MRERA and the chief operating officer he appointed had both resigned, and a new governor had been elected.

It was not until several years after the observation period for this paper ended that significant development on each of the three fronts began to materialize. In municipal reform and economic development, the city eventually made significant progress in completing major municipal management, infrastructure, and housing plans; collecting delinquent tax revenues; and launching public-private expansions of Camden's educational and medical institutions. The regional equity agenda achieved major legislative victories in the Council on Affordable

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Table 6

Key Events in the Camden Redevelopment Process

Key Redevelopment Event	2000	2001	2002	2003	2004	2005	2006	2007	2008
State legislation									
Municipal Rehabilitation and Economic Recovery Act (MRERA) in effect			*	*	*	*	*	*	*
New Jersey Tax Lien Financing Corporation established to service 3,700 tax liens				*					
Council on Affordable Housing (COAH) Third Round Rules adopted									*
"Roberts Bill" State Law A500/S1783 adopted									*
Economic Recovery Board (ERB) and city plans									
ERB Strategic Revitalization Plan				*					
ERB Capital Improvement and Infrastructure Master Plan				*					
ERB priority projects list				*					
Municipal management study					*				
Downtown Camden Strategic Development Plan					*				
Downtown market study						*			
Camden Five-Year Consolidated Plan						*			
Neighborhood plans approved by city council									
Broadway, Centerville, and Parkside				*					
Cramer Hill and Whitman Park					*				
Bergen Square, Central Waterfront, Cooper Plaza, and Downtown						*			
Gateway, Liberty Park, and Rosedale							*		
Major municipal reform efforts									
City subcontracts servicing of 7,500 municipal tax liens			*						
Municipal tax sales					*	*	*		

(continued)

Table 6 (continued)

Key Redevelopment Event	2000	2001	2002	2003	2004	2005	2006	2007	2008
Major redevelopment projects completed									
$24.4m Camden County College Technology Center				*					
$10.5m CAMCare Gateway Health Center					*				
$54m expansion of Our Lady of Lourdes Health Center						*			
Litigation									
Superior Court grants injunction on relocations in Cramer Hill						*			
Superior Court overturns Cramer Hill plan							*		
Changes in administration									
Change in state gubernatorial administration					*				
Change in state gubernatorial administration							*		
Change in administration of Chief Operating Officer of the Camden Redevelopment Agency							*		

SOURCES: Primas, 2006; Economic Recovery Board for Camden, 2009; Lake, et al., 2007.

Housing's Third Round Rules[20] and the "Roberts Bill,"[21] both of which took effect in 2008. Community-based organizations completed impressive renovation and restoration projects in middle-income neighborhoods with fairly well-preserved housing stock, such as Fairview and Parkside, neither of which were high-profile targets of central redevelopment planning.

Unfortunately, just as significant development was beginning to materialize, the sub-prime mortgage crisis became evident. Rising mortgage delinquencies, defaults, and foreclosures first became apparent in 2005-2007 and eventually triggered a global financial crisis in 2008. Thus, the observation period for this paper, which ended in 2006, misses some of the first concrete accomplishments of development, which themselves only took root amid a historic collapse in the markets they were meant to stimulate. These misfortunes are bound to prove detrimental to Camden's progress toward growth and equality in the near term. The application of this framework over time may help to assess the stability of the gains of the 1990s through the crises of the early 2000s and, hopefully, the first signs of Camden's next period of recovery.

Data Sources

The indicators of the redevelopment framework introduced above are drawn from three widely accessible data sources, as shown in Table 7.

- *U.S. Census:* Indicators of population, poverty, housing affordability, segregation, and labor force participation rates are drawn from U.S. Census 1990, 2000, and 2006 data. The 1990 and 2000 data were drawn from the decennial census, which uses samples ranging from every U.S. household, for a short list of demographic items, to one in six U.S. households for a longer list of economic and housing items. The 2006 data were drawn from the American Community Survey (ACS), which collects annual information from a smaller sample of approximately 3 million households nationwide. Because the ACS samples are much smaller, ACS survey estimates are less precise than decennial estimates.

[20]The Fair Housing Act of 1985 commissioned the Council on Affordable Housing (COAH) to certify that municipalities proactively met their state-mandated fair-share housing obligations. COAH set guidelines for the number of affordable housing opportunities municipalities should provide relative to physical and job growth. The Third Round Rules, passed in May 2008, require municipalities to create one affordable unit per every five market-rate units or every 16 new jobs.

[21]The "Roberts Bill," State Law A500/S1783, signed into law on July 17, 2008, bans Regional Contributions Agreements (RCAs), widely considered a loophole in fair-share obligations, by which one municipality could be relieved of up to half of its fair-share housing obligation by paying a fee to transfer the obligation to another municipality.

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Table 7

Indicators and Data Sources

	Data Source		
	U.S. Census	Home Mortgage Disclosure Act Data (HMDA)	Local Employment Dynamics Database (LED)
Outcomes for residents			
Growth			
Rate of population decline	1990, 2000, 2006		
Total employment			1997-2006
Equality			
Number of residents living in poverty	1990, 2000, 2006		
Camden labor force participation rate	1990, 2000, 2006		
Outcomes for housing markets			
Growth			
Private home purchase capital (HPC) investment		1992-2006	
Subprime lending		2004-2006	
Equality			
Private home purchase capital (HPC) investment among borrowers of color		1992-2006	
Private home purchase capital (HPC) investment among borrowers with annual incomes less than, or equal to $30,000 per year		1992-2006	
Critical housing affordability needs among low-income renters	1990, 2000, 2006		
Critical housing affordability needs among low-income homeowners	1990, 2000, 2006 [a]		
Segregation by race/ethnicity	1990, 2000		
Segregation by household income	1990, 2000		

NOTE: [a]Data on critical housing needs among low-income homeowners were not reported for 2006 due to small sample sizes; this paper uses the U.S. Census Bureau American Community Survey multiyear (2005-2007) average instead.

- *Home Mortgage Disclosure Act (HMDA) data*: As explained above, the 1975 federal HMDA requires banks and other lenders to report the number, approval rates, and amounts of home mortgage loan applications by applicant characteristics such as race, sex, and income, and by property location. HMDA data are collected and maintained by the Federal Financial Institutions Examination Council. This analysis selects records with nonmissing census tract and county values for single-family homes occupied by the owner as a principal dwelling. This paper draws on annual HMDA data for the 1992-2006 period reported at the census tract level.

- *Local Employment Dynamics (LED) database*: The Local Employment Dynamics (LED) partnership of the U.S. Census and New Jersey state employment agencies provides several quarterly workforce indicators that are useful for gauging the strength of the South Jersey labor market. This paper draws on quarterly workforce indicators for the 1997-2006 period reported at city and county levels.

Outcomes for the City of Camden

Residents

This section reports on two principal outcomes for Camden residents: (1) growth, in this case a reduction in the rate of population decline, and (2) equality, a reduction in the number of residents living in poverty.

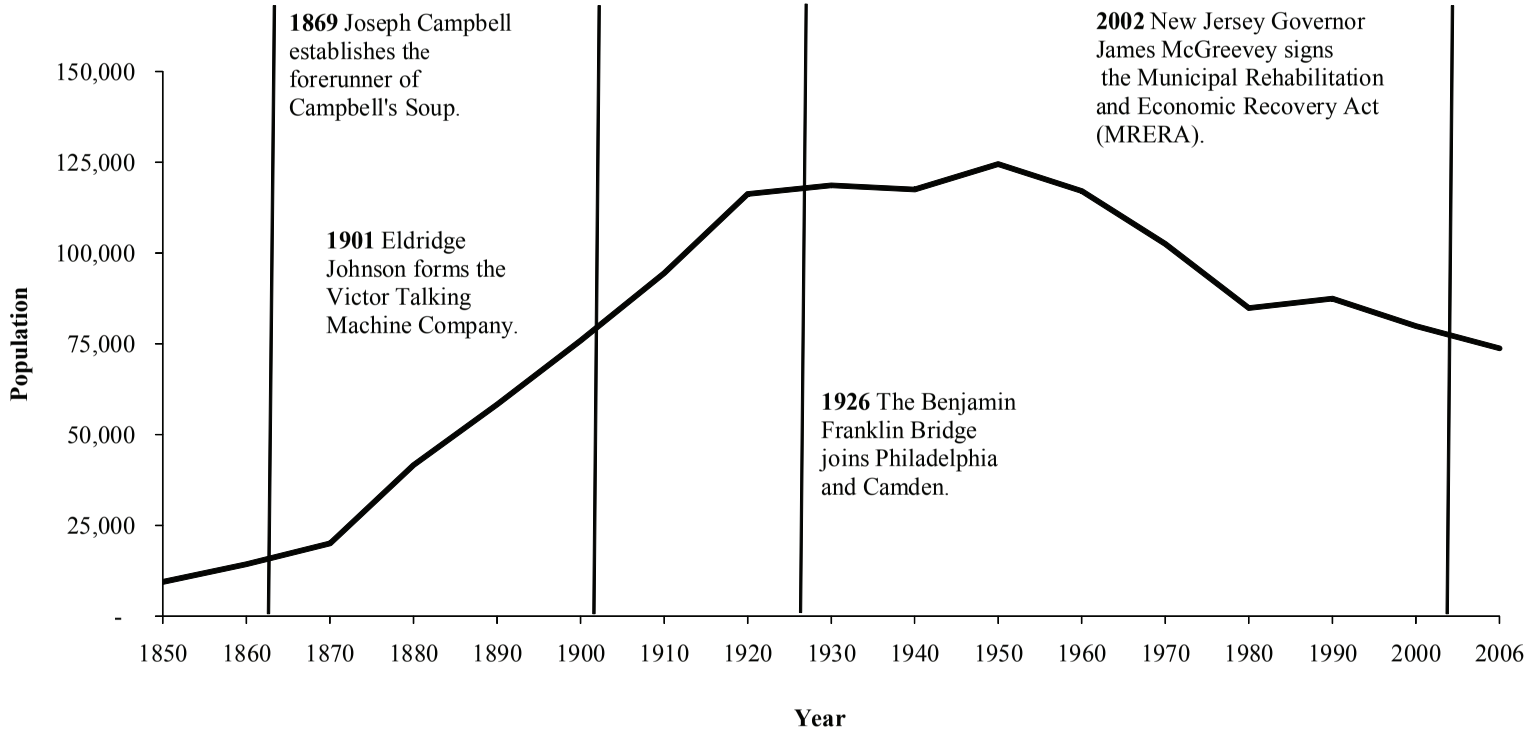
1. Growth: Camden's population continued to decline but increasing Hispanic, Asian, and foreign-born populations helped to offset the declining white and black populations.

As described above, aggregate population growth, even if it consists primarily of poor residents, will help to repopulate Camden and thus justify the public investments needed to maintain it as a city.

Figure 1 illustrates the rise and fall of Camden's population between 1850 and 2006. Between 1870, one year after Joseph Campbell established the business that would become Camden's most famous anchor company, and 1930, just four years after the Benjamin Franklin Bridge made Camden a "second Brooklyn" to Philadelphia, Camden's population increased nearly 500 percent, from 20,000 to nearly 120,000. Its population peaked in 1950 at 124,555, and then declined by nearly a third to 84,910 in 1980. Cities generally grow faster than they decline, however, and Camden's 41 percent decline between 1950 and 2006 was not nearly as sharp as its 64 percent expansion between 1900 and 1950. While a reversal in Camden's

Figure 1

Population of the City of Camden, 1850-2006



SOURCES: Gillette, 2005; Gibson, 1998; U.S. Census, 1960, 1970, 1980, 1990, and 2000.

population decline, similar to the one that occurred during the 1980s, may not be realized in the short term, reducing the rate of decline seems to be a feasible goal, based on these trends.

Camden's population declined by 8.7 percent during the 1990s and by an additional 7.6 percent during the first six years of the 2000s. Map 2 illustrates the pattern of population change between 1990 and 2000 in the South Jersey region. It shows population declines in Camden and other older municipalities and a distinct growth corridor in the center of the region.

The substantial 1990 to 2006 declines in Camden's white (-76 percent) and black (-24 percent) populations were offset by sharp growth in its Hispanic (21 percent), Asian (99 percent), and foreign-born (171 percent) populations; foreign-born residents came primarily from the Dominican Republic and Vietnam.

2. Equality: Poverty declined and incomes improved during the roaring 1990s but these gains subsided with slowing economic growth in the early 2000s.

Map 3 shows changes in the number of poor residents among Camden neighborhoods between 1990 and 2000. In 10 of Camden's 21 neighborhoods, poverty declined substantially over the decade.

Table 3 presents data on the 1990 to 2006 declines in the number of individuals and families living in poverty. Indeed, between 1990 and 2006, the number of families in poverty in Camden declined by 24 percent, from 6,575 to 5,289 (not shown). The number of families with incomes of less than $10,000 and less than $29,000 declined, while those with incomes above $30,000, $50,000, $60,000, and $100,000 increased. The number of individuals living in deep poverty (that is, with incomes less than half of the federal poverty guideline) declined by 37 percent, and the number of individuals living in poverty declined 34 percent. These findings are consistent with a trend of substantial declines in poverty in many American cities during the 1990s.

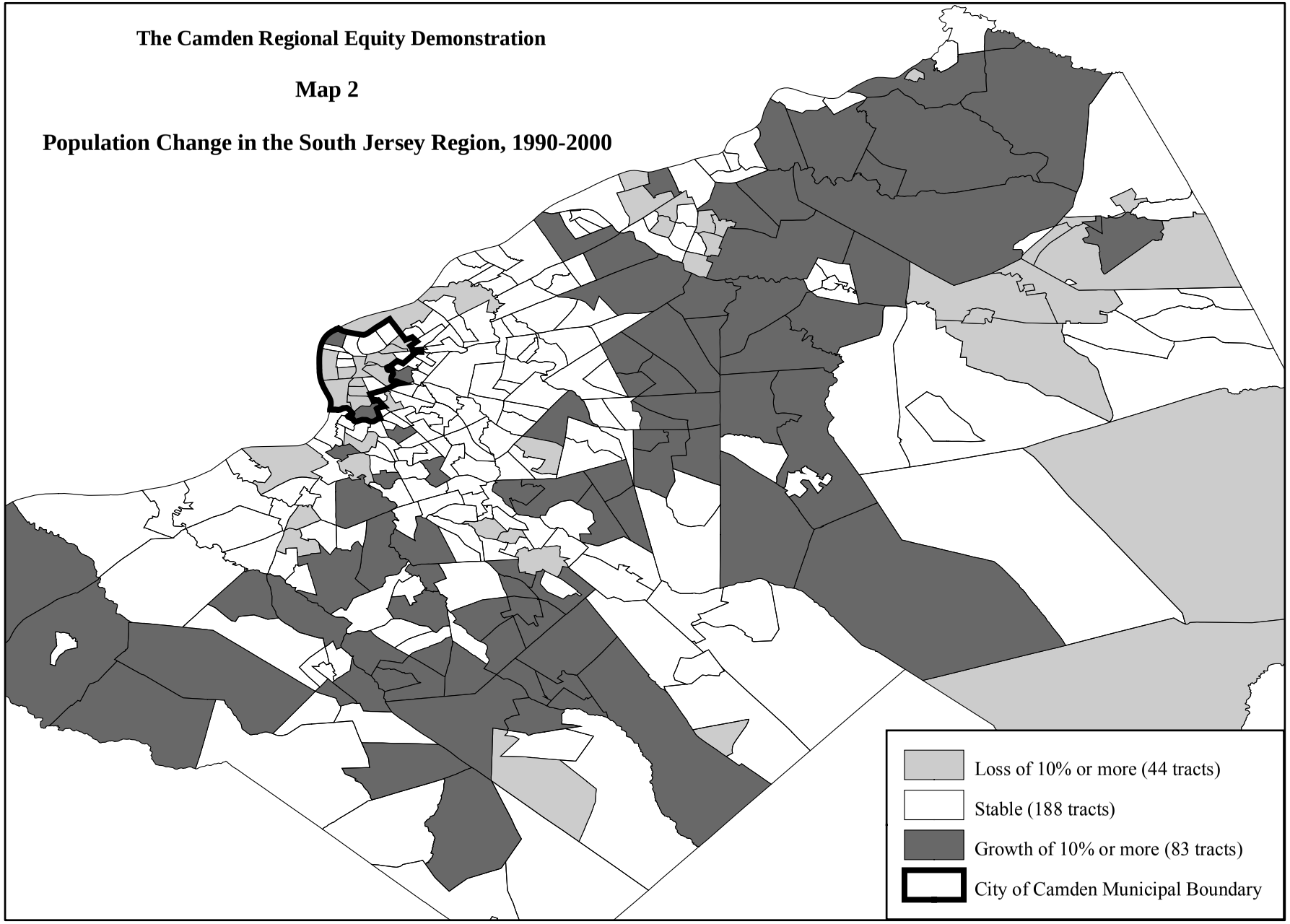
However, as the growth of the roaring 1990s subsided in the early 2000s, so did the dramatic declines in poverty and social distress. Between 2000 and 2006, Camden's poverty rate stayed at approximately 36 percent, which is exceptionally high. If the lesson of the 1990s was that seemingly persistent problems of urban poverty and social distress were responsive to strong and sustained economic growth, the caveat of the early 2000s was that when the growth slowed so would the progress in poverty reduction, often well before concentrated poverty was alleviated.[22]

[22]Seith, Rich, and Richburg-Hayes, 2007.

The Camden Regional Equity Demonstration

Map 2

Population Change in the South Jersey Region, 1990-2000



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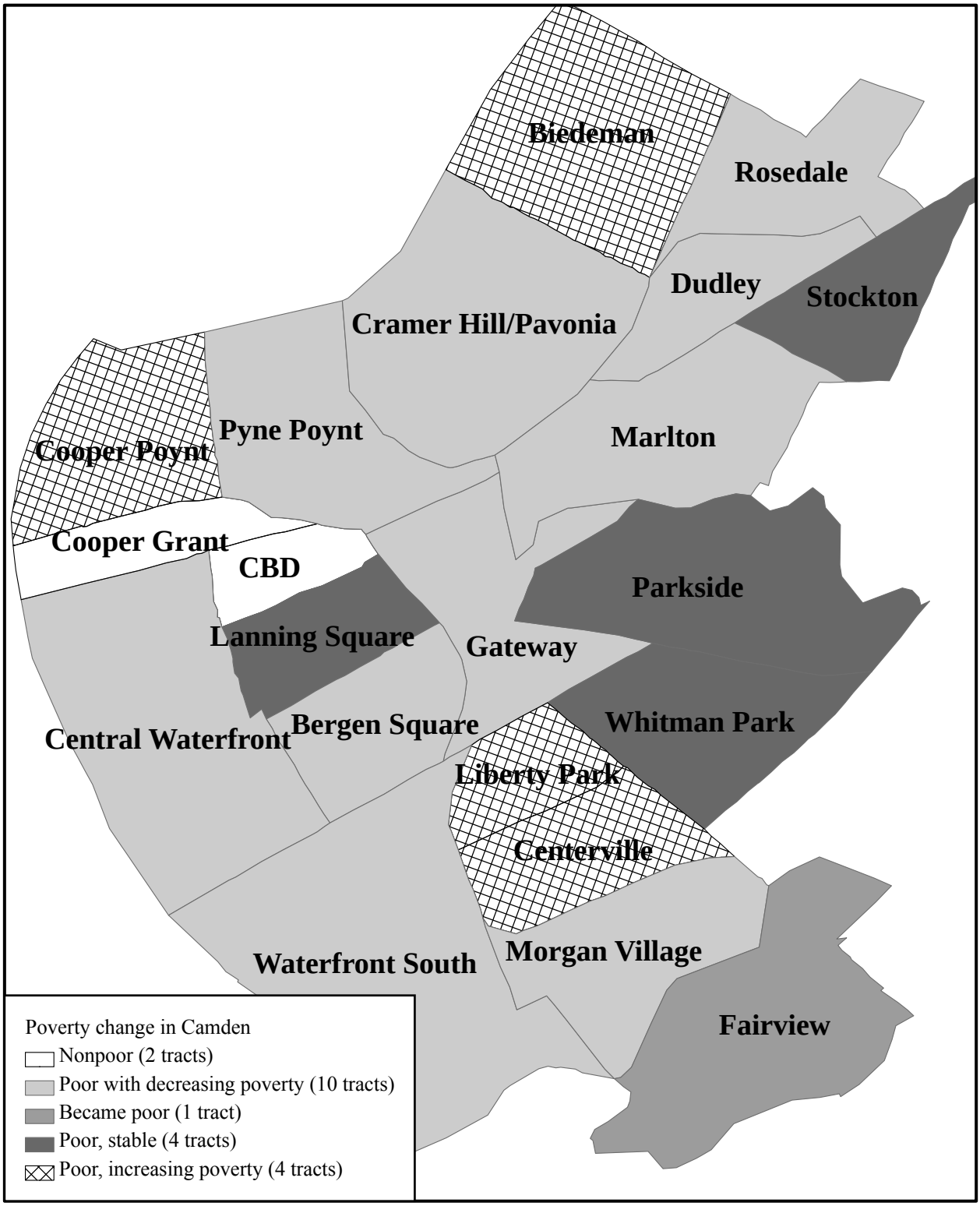
Map 3

Change in Rates of Neighborhood Poverty, City of Camden, 1990-2000



Housing Markets

This section reports on the 10 key outcomes for Camden's housing markets shown in the second panel of Table 1.

1. Growth: Camden's flows of home investments strengthened over the first five years of redevelopment, due to sharp increases in investments among people of color.

As discussed above, private home purchase investments represent a profound commitment of individuals to a place, and in the aggregate determine the nature and vitality of residential neighborhoods. Home purchase decisions also reveal information about subgroups of buyers — the extent to which low-income buyers and people of color are claiming their proportionate share of local housing opportunities.

Although flows of HPC into the City of Camden were weak compared with those of the region, they were not altogether stagnant. Figure 2 shows the trend in the total amount of HPC invested in Camden between 1992 and 2006 (represented in increments of two-year averages to account for year-to-year fluctuations.) Total HPC vacillated from $21 million to $36 million, with modest, but relatively stable growth in the mid-2000s. The number of approved mortgages grew 116 percent from 243 to 524 (not shown).

Trends in HPC by race show increases in home investments by black and Hispanic buyers, offsetting declines among white and Asian buyers. Figure 3 shows 1992-2006 trends in HPC by race (inflation adjusted to $2006). Black buyers' HPC increased more than threefold from $2.5 million to $11 million. As a share of total HPC, black buyers' HPC increased from 16 percent to 31 percent. Hispanic buyers' HPC increased more than fivefold from $3 million to $16.5 million, and from 12 percent to nearly half (46 percent) of total Camden HPC. White buyers' HPC declined sharply in the early 1990s from $11 million to $2 million but rebounded in the mid-2000s to $5 million. Over the period, it declined from 53 percent to 8 percent of total HPC, before rebounding to 13 percent. Similarly, Asian buyers' HPC fell from $700,000 to $260,000 before rebounding to $1 million. Asian buyers' HPC accounted for only 1 percent to 3 percent of Camden's HPC. Taken together, HPC among nonwhite buyers grew from 31 percent to 80 percent of Camden's HPC.

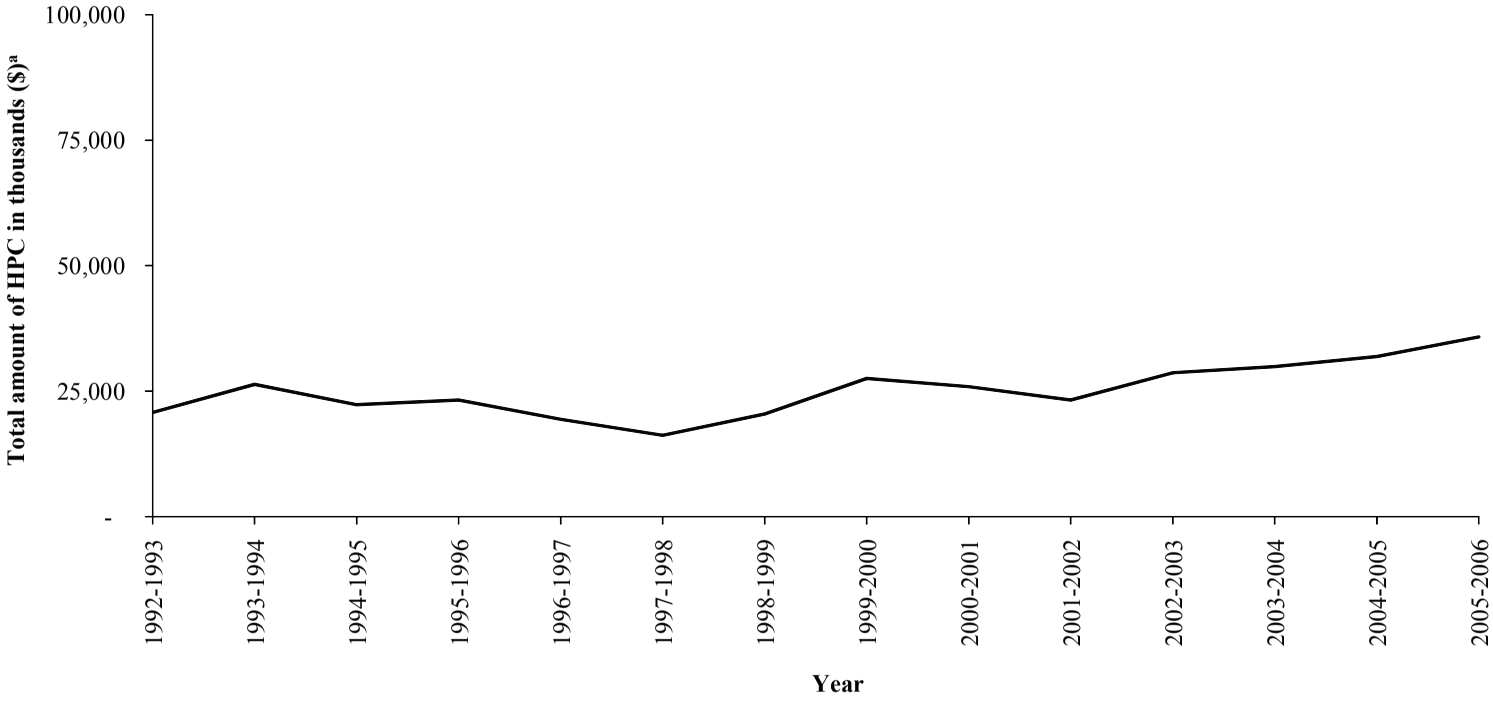
2. Equality: The share of approved mortgages claimed by low-income buyers declined from 51 percent in 1992-1993 to 45 percent in 2005-2006.

Figure 4 shows the 1992-2006 trend in the percentage of total approved mortgages claimed by primary applicants whose annual incomes were equal to or less than the 2005 equivalent of $30,000 per year. The share of approved mortgages for low-income borrowers

The Camden Regional Equity Demonstration

Figure 2

Total Home Purchase Capital (HPC)
in the City of Camden, 1992-2006



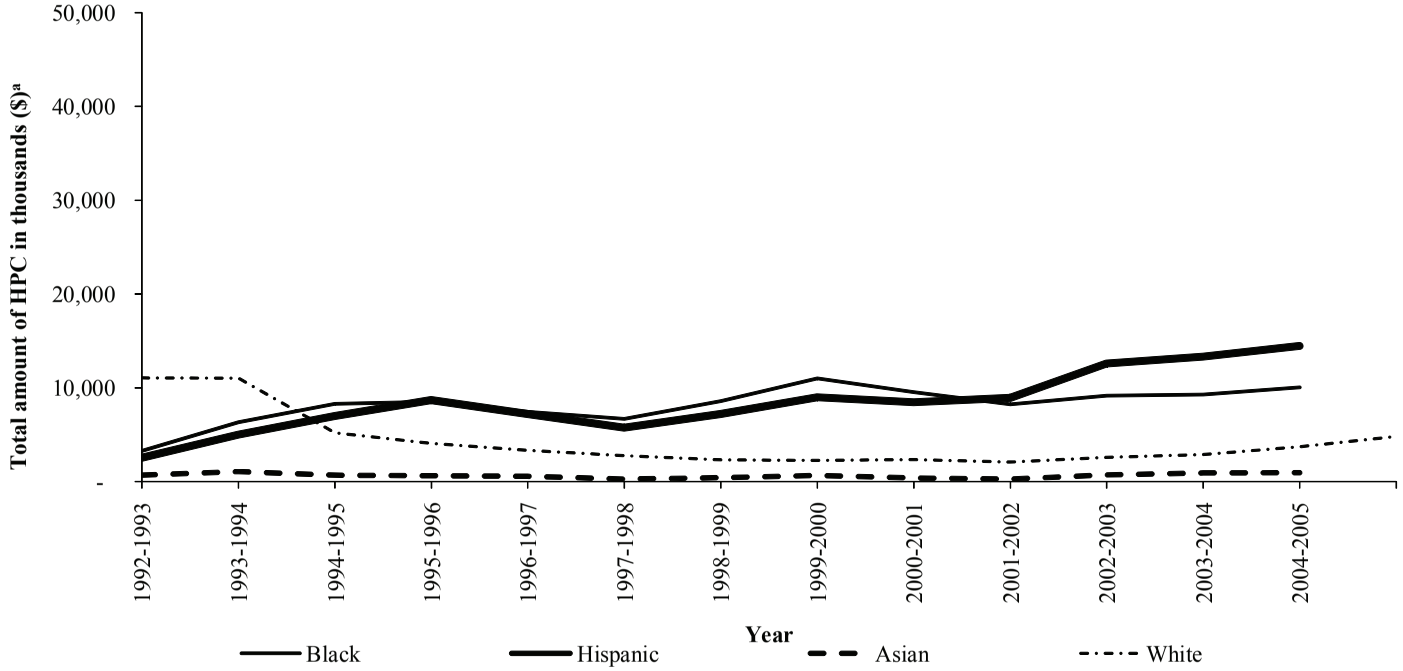
SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

NOTE: [a]All dollar values have been normalized to 2006 dollars.

The Camden Regional Equity Demonstration

Figure 3

Home Purchase Capital (HPC) Among Nonwhite Home Buyers in the City of Camden, 1992-2006



SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

NOTE: [a]All dollar values have been normalized to 2006 dollars.

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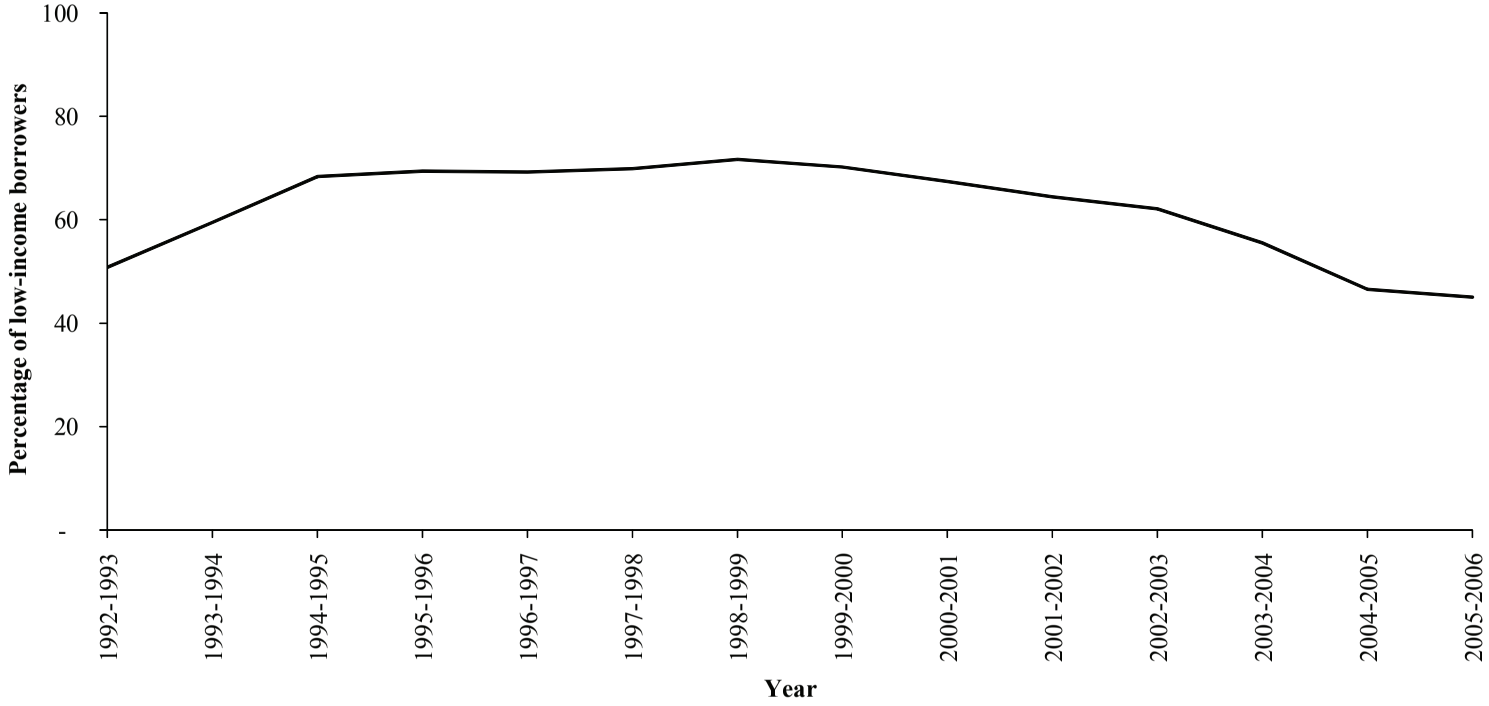
Figure 4

Approved Low-Income Borrowers as a Proportion of All Approved Borrowers in the City of Camden, 1992-2006



SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

increased from 51 percent in 1992-1993 to a high of 72 percent in 1998-1999, and then declined to 45 percent in 2005-2006.

3. Equality: Over the 15-year period, Camden attracted buyers from a similar slice of the income distribution.

Throughout the first six years of redevelopment, stakeholders disagreed about whether to aggressively court investment from higher-income home buyers or to focus on preserving opportunities for lower-income households to purchase homes. Implicitly, this was an argument about how the distribution of Camden homebuyers' incomes and home purchase prices should change. Proponents of redevelopment wanted to see strong growth in more expensive home purchases among higher-income buyers, which they hoped would stimulate new construction and renovation in the housing market, while replenishing municipal revenues and reducing the residential concentration of poverty and its attendant service demands. Thus implicitly, proponents of redevelopment wanted both the distribution of homebuyers' incomes and home purchase prices to shift upward. Opposition to redevelopment stemmed from a broader and less clearly articulated mix of concerns and motivations. Some opponents were simply disappointed and confused by the lack of communication and civic participation; others were concerned that redevelopment would result in unfair abuses of eminent domain and pervasive gentrification and, implicitly, that it would shift the distributions of homebuyers' incomes and home purchase prices so high that opportunities for low-income buyers to purchase homes would be sharply reduced.

HMDA data allow observers to track the actual distributions of home buyers' incomes and home purchase prices over time, shedding light on *what is happening* rather than *what might be happening*. Figure 5 plots the distributions of the incomes of primary mortgage applicants who were approved for home purchase mortgages in Camden in 1992-1993 with a solid line and in 2005-2006 with a bolded line. It shows that this growth occurred among buyers with similar incomes (roughly $20,000 to $60,000). In other words, Camden continued to attract home-buyers from the same class of incomes over the 15-year period.

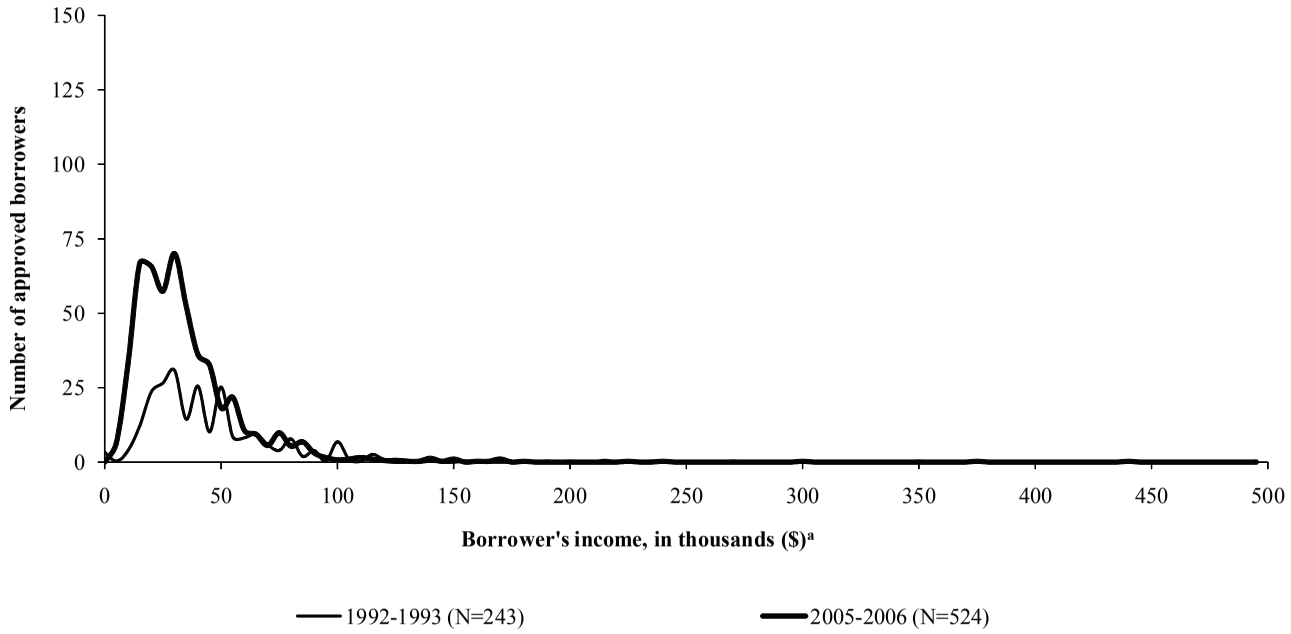
Similarly, Figure 6 plots the distributions of mortgage amounts in 1992-1993 with a solid line and in 2005-2006 with a bolded line. Growth in mortgages was particularly strong in the $60,000 to $105,000 price range, and there was also some growth in mortgage amounts of less than $30,000.[23]

[23]MDRC calculations based on HMDA data show that of the mortgages included in the Camden analysis, only 0.01 percent were for second liens in 2004, 0.02 percent in 2005, and 10.08 percent in 2006.

The Camden Regional Equity Demonstration

Figure 5

Number of Approved Mortgages by Borrower's Income in the City of Camden, 1992-1993 and 2005-2006



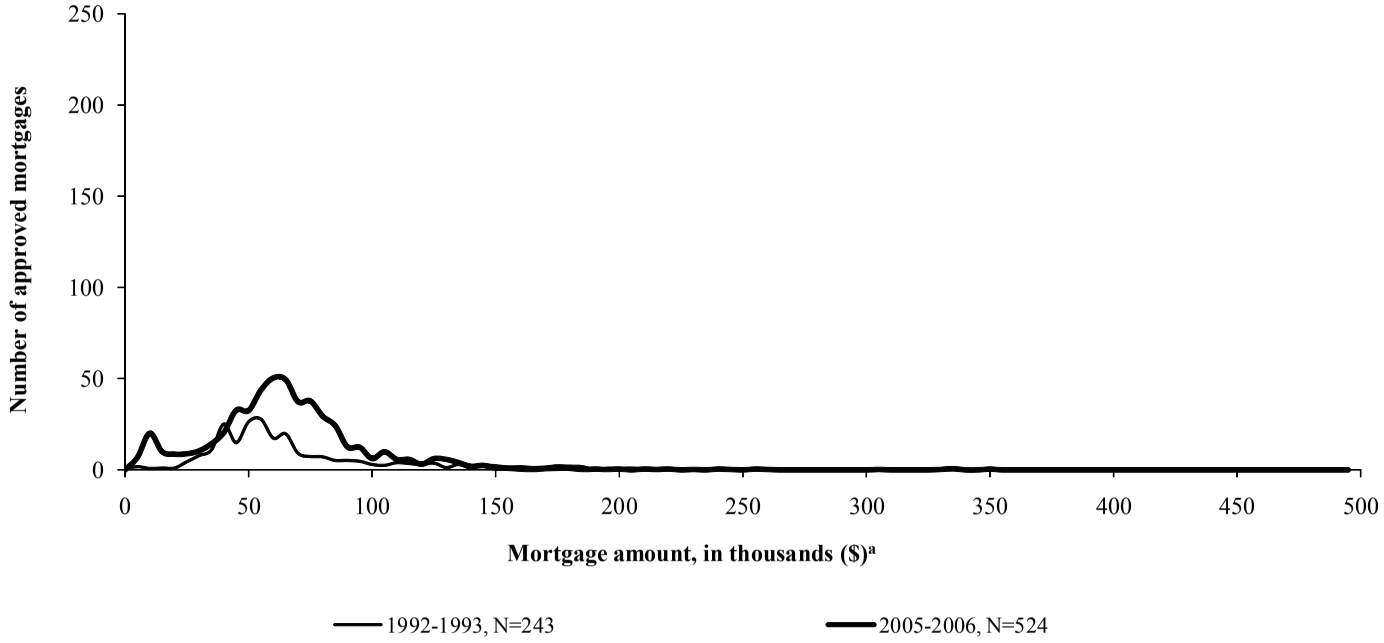
SOURCE: Home Mortgage Disclosure Act data, 1992, 1993, 2005, and 2006.

NOTE: [a]All dollar values have been normalized to 2006 dollars.

The Camden Regional Equity Demonstration

Figure 6

Number of Approved Mortgages by Mortgage Amount in the City of Camden, 1992-1993 and 2005-2006



SOURCE: Home Mortgage Disclosure Act data, 1992, 1993, 2005, and 2006.

NOTE: [a]All dollar values have been normalized to 2006 dollars.

During the period monitored by this paper, Camden continued to attract primarily low-income buyers. The overall distribution of mortgage amounts did shift upward but there was modest growth in the number of homes sold across a broader range of incomes and prices.

4. Growth: Subprime lending increased in both Camden and the region between 2004 and 2006.

Table 8 shows the number and proportion of borrowers who had subprime mortgages, among all borrowers and among low-income borrowers in the City of Camden and in the balance of the South Jersey region from 2004, when this information became available, to 2006. There was a noticeable increase in subprime lending between 2004 and 2005. Somewhat surprisingly, subprime loans were more common among all borrowers than among low-income borrowers. Subprime lending was often more common in the region than in Camden.

5. Equality: Although there were fewer low-income households in 2000 than 10 years earlier, critical needs for affordable housing increased among the remaining low-income households and among all renters in Camden.

Table 9 assesses critical needs for affordable housing among homeowners and renters in the City of Camden and in the balance of the South Jersey region in 1990, 2000, and 2006. The first row lists the total number of housing units occupied by renters and owners in Camden and in the balance of the region in 1990, 2000, and 2006. Note that the number of owner-occupied housing units in Camden declined over the decade, while the number of both rental and owner-occupied units increased in the region.

The second row shows the number of households with incomes of less than $35,000, unadjusted for inflation.[24] Note that the number of these low-income households declined over the period among all four subgroups — homeowners and renters in the City of Camden and in the balance of the South Jersey region (which is consistent with the declining poverty rates and rising incomes of Camden's residents discussed above.)

The third row shows the proportion of low-income households who spent more than 30 percent of their income on housing, that is, those with critical needs for affordable housing.

[24]For convenience, this analysis uses $35,000 in nominal dollars as the threshold to define low income. The median household income for the Philadelphia Primary Metropolitan Statistical Area (PMSA) was $35,437 in 1990, $47,528 in 2000, and $52,804 in 2006. Thus, some reduction in the number of low-income households could simply be an artifact of the growth in regional household income.

The Camden Regional Equity Demonstration

Table 8

Approved Borrowers and Proportion with Subprime Mortgages in Camden and the South Jersey Region, 2004, 2005 and 2006

	2004		2005		2006	
Characteristic	Approved Mortgages	Percentage Subprime	Approved Mortgages	Percentage Subprime	Approved Mortgages	Percentage Subprime
City of Camden						
All borrowers	114	2.6	79	12.7	97	11.3
Low-income borrowers	75	1.3	30	0	27	7.4
South Jersey Region						
All borrowers	22,873	5.7	24,673	11.7	21,585	12.4
Low-income borrowers	1,596	5.7	1,224	9.9	777	8.5

SOURCE: MDRC calculations from Home Mortgage Disclosure Act 2004, 2005, and 2006 data.

NOTE: Following Avery, Canner, and Cook, 2005, this report identifies subprime loans as those with at least a three-point spread between the annual percentage rate (APR) on a loan and the rate on Treasury securities of comparable maturity.

Here the findings are less positive. They suggest that although the number of extremely low-income households declined, the incidence of critical needs for affordable housing among low-income households increased.

For example, the first three columns show that the proportion of low-income Camden homeowners with critical housing needs increased from less than half (39 percent) to almost three-quarters (74 percent). The proportion of low-income Camden renters with critical housing needs increased from more than half (56 percent) to nearly two-thirds (65 percent). Low-income homeowners in the balance of the South Jersey region, although declining in number, were hit the hardest; their critical housing needs increased from less than half (46 percent) to nearly all (94 percent). Among low-income renters in the balance of the South Jersey region, critical housing needs increased from just over half of all households in 1990 (53 percent) to most households (80 percent) in 2006.

Since it is difficult to interpret the implications of a growing incidence of a problem (housing cost burdens) for a declining population (low-income households), the fourth row presents the *number* of households with critical housing needs for each of the four subgroups — homeowners and renters in Camden and in the balance of the South Jersey region. It offers the best metric for assessing the change in the absolute size of the critical housing needs problem. It shows that the number of households with critical housing needs declined sharply among

Table 9

Households with Housing Cost Burdens in Camden and the South Jersey Region, 1990, 2000, and 2006

Characteristic	Homeowners			Renters		
	1990	2000	2006	1990	2000	2006
City of Camden						
Total households	11,934	10,169	9,830	13,547	12,950	13,457
Low-income households (<$35K)	8,179	5,360	4,613	12,158	10,251	10,298
Percentage of low-income households with rent burdens ≥ 30 percent of income (%)	39.2	50.1	74.2	55.6	57.2	64.9
Number of households with rent burdens	3,204	2,683	3,421	6,761	5,865	6,685
Percentage of all households with rent burdens (%)	26.8	26.4	34.8	49.9	45.3	49.7
Balance of South Jersey Region						
Total households	257,940	294,731	343,602	103,733	108,178	108,397
Low-income households (<$35K)	85,498	125,134	28,916	73,648	61,640	52,436
Percentage of low-income households with rent burdens ≥ 30 percent of income (%)	46.3	31.7	93.5	53.1	62.4	80.0
Number of households with rent burdens	39,603	39,683	27,046	39,139	38,486	41,926
Percentage of all households with rent burdens (%)	15.4	13.5	7.9	37.7	35.6	38.7

SOURCE: MDRC calculations from 1990 and 2000 U.S. census data and the U.S. Census Bureau American Community Survey 2006 and 2005-2007.

homeowners in the balance of the South Jersey region. However, it increased among homeowners in Camden, as it did among renters in the balance of the region.

The last row helps to interpret the levels of and change in the incidence of critical needs for affordable housing among all households (regardless of income), by showing the *proportion* of total homeowner and renter households in the two areas who had critical housing needs. It shows that the incidence of critical housing needs increased among Camden homeowners, remained fairly stable among renters in Camden and in the balance of the South Jersey region, and declined sharply among homeowners in the balance of the South Jersey region (the least disadvantaged group).

6. Equality: Segregation by race and income is more acute across the entire region than among neighborhoods in Camden; segregation by race declined over the decade from moderately high to moderate, while segregation by income remained modest.

- With respect to its composition and segregation by race and ethnicity, Camden is similar to the comparison cities. It has relatively few white and middle- to upper-income residents overall, and relatively low levels of segregation among its neighborhoods.

Before comparing segregation in Camden and in the region, understanding how Camden compares with similar New Jersey cities provides a context for appreciating the scales of these indices. Table 10 compares Camden with four similar New Jersey cities on three dimensions of segregation by race and ethnicity. Like Camden, the cities of Passaic, Paterson, Trenton, and Union City[25] are small, with less than 150,000 residents, and have poverty levels of 20 percent or more. Of these four comparison cities, Trenton is the only one located in the South Jersey region.

With just under 80,000 residents in 2000, Camden is smaller than Paterson and Trenton and a little larger than Passaic and Union City, as shown in Table 10. Together, the four cities illustrate the diversity of New Jersey's urban residential compositions. Like Passaic, Paterson, and Union City, Camden has a sizeable Hispanic/Latino population and, like Trenton, a sizeable black population. At the same time, white residents are underrepresented in Camden relative to the other cities.

As explained in Table 5, the E score helps to gauge the diversity of neighborhood representation with respect to the four major racial/ethnic groups found in the South Jersey region — whites, blacks, Hispanics, and Asians. Camden's score of 0.620 suggests that Camden's neighborhoods are relatively diverse, slightly more so than the other four distressed cities (0.381-0.610).

The H index, presented in the second row of the second panel, helps to assess the representation of major subgroups of Camden residents across neighborhoods, that is, the extent of segregation. Camden's score of 0.189 suggests that racial/ethnic segregation by neighborhood is relatively low, lower than that found in Passaic, Trenton, and Union City (0.234, 0.246, and 0.249) and only slightly higher than that found in Paterson (0.180).

The Dissimilarity, or D index, is employed here to gauge residential segregation among black and white residents, which for historical, policy, and methodological reasons is the

[25]Note that Union City is located in Hudson Country, New Jersey, in contrast with Union Township, which is located in Union Country, New Jersey.

The Camden Regional Equity Demonstration

Table 10

Composition and Segregation by Race/Ethnicity and Income among Residents of Camden and Similar New Jersey Cities in 2000

Characteristic	Camden	Passaic	Paterson	Trenton	Union City
Population	78,312	66,451	144,149	81,771	67,088
Race/ethnicity (%)					
Hispanic/Latino	39.6	63.8	51.9	22.2	82.3
Black, non-Hispanic/Latino	50.8	12.1	32.5	51.8	0.9
White, non-Hispanic/Latino	7.2	18.7	13.7	25.2	13.4
Asian, non-Hispanic/Latino	2.4	5.4	1.9	0.8	2.3
Segregation by race/ethnicity					
Diverse representation of the four major racial/ethnic groups[a]	0.620	0.610	0.607	0.568	0.381
Segregation among the four major racial/ethnic groups[b]	0.189	0.234	0.180	0.246	0.249
Segregation of black vs. white households[c]	46.5	49.5	56.9	64.1	33.4
Interaction of black and white residents[d]	6.4	15.7	8.6	13.6	15.6
Individual poverty rate (%)	35.5	21.2	22.2	21.1	21.4
Household income (%)					
Very low income	56.3	39.0	41.2	43.6	44.4
Low income	20.3	22.5	20.5	20.2	22.9
Moderate income	11.2	14.0	13.7	12.8	12.7
Moderately high income	5.8	8.2	8.5	8.5	7.0
High income	3.9	8.4	8.0	7.9	6.7
Very high income	2.4	7.9	8.1	6.9	6.3
Segregation by household income					
Diverse representation of the six household income classes[a]	0.647	0.836	0.817	0.819	0.817
Segregation among six household income classes[b]	0.017	0.080	0.106	0.074	0.043
Segregation by household income[e]	0.249	0.268	0.337	0.295	0.160
Segregation of poor vs. nonpoor households[c]	13.9	17.2	23.1	23.8	12.7
Interaction of poor and nonpoor residents[d]	62.8	75.9	73.5	74.0	77.4

(continued)

Table 10 (continued)

SOURCE: MDRC calculations from 2000 U.S. census data.

NOTES: The six categories are: very low income (less than 50 percent of the median household income); low income (50-80 percent of the MHI, $17,900-$38,022), moderate income (80-100 percent of the MHI, $38,023-$47,528), moderately high income (100-120 percent of the MHI, $47,529-$57,034), high income (120-150 percent of the MHI, $57,035-$71,292), and very high income (greater than 150 percent of the MHI, or $71,292). Generally accepted procedures of linear interpolation were used to estimate the proportion of households within given census income categories that fell above or below these income thresholds.

See appendix for detailed explanation of all scores and indices.

[a] Computed using the Multigroup Nominal Entropy Score (E score).

[b] Computed using the Multigroup Nominal Entropy Index (H index).

[c] Computed using the Dissimilarity Index (D index).

[d] Computed using the Interaction Index (P* index).

[e] Computed using the Gini Index of Segregation (G_s).

arguably the best two-group racial diversity comparison. Camden's score can be interpreted to mean that a combined total of 46.5 percent of Camden's white and black residents would need to move to achieve a perfectly even neighborhood distribution of white and black residents. Camden is found to be less segregated on this measure than three of the other four comparison cities. Indeed, it is far below the national average. What this means is that even though few whites remain in Camden, they are relatively evenly spread across its neighborhoods.

The Interaction Index (P*) measures the probability that randomly selected members of two groups will share a neighborhood. Table 10 shows that, on average, black residents in Camden are less likely (6 percent) than their counterparts in the comparison cities (9-16 percent) to share a neighborhood with white residents.

- Camden's residents are substantially poorer than residents of the other cities, and among Camden neighborhoods segregation by income is very low.

The third panel of Table 10 shows that relative to the comparison cities, Camden is poorer, and its household income distribution is significantly skewed toward the lower end. In 2005, Camden was one of the poorest cities in the United States, with an individual poverty rate of 35.5 percent.[26] Individual poverty rates in the three distressed cities, by contrast, ranged from 21.1 percent to 21.4 percent. The incomes of more than half of Camden's households (56 percent) fell into the "very low" category. Less than half the households in the other three

[26]See Figure 1 and Table 8 in Webster and Bishaw, 2006.

distressed cities (39-44 percent) had incomes this low. Camden's households were often underrepresented in the remaining income categories with respect to the other cities.

As mentioned above and explained in more detail in Table 5, the E score measures the representation of major subgroups, in this case, classes of household incomes within neighborhoods. Camden's low score of 0.647 reflects the underrepresentation of higher-income households. Camden's E score is substantially lower than any of the other cities' scores.

The H index defines segregation as the extent to which neighborhood-level representation deviates from citywide diversity. As explained in Table 5, an H index score of .017 can be interpreted to mean that existing members of each of the household income classes are equally distributed across neighborhoods. The very low H index scores presented in Table 10 (0.017 to 0.106) show that this is nearly the case in Camden and each of the four comparison cities.

That there is relatively little neighborhood segregation among the six household income classes does not mean that there is no income segregation whatsoever. Given the relatively low levels of representation of several of the higher-income classes within Camden, the fact that they are relatively equitably distributed may simply reflect the fact that there are few of such households in any neighborhood. While evenness of the residential distribution of households to neighborhoods is an important goal, analyses of segregation are motivated by expectations of civic engagement and information exchanges that demand a representative mix of household incomes.

As a continuous measure of segregation by income, the Gini Index of Segregation helps to assess the level of segregation by income among all households, irrespective of which income classes they fall into. Camden's G_s score of 0.249 out of a possible 1 is relatively low, suggesting a low level of neighborhood segregation by household income.[27] Thus, while the H index suggests that there is fairly little intra-class segregation of households from the six income classes among Camden neighborhoods, the G_s index suggests that there is a modest degree of neighborhood segregation among households with different incomes.

The D index characterizes segregation between poor and nonpoor Camden residents as the proportion of the total population (that is, both poor and nonpoor residents combined) that would need to relocate to another neighborhood to achieve a perfectly even neighborhood-level distribution of poor and nonpoor residents. Camden's score of 13.9 is lower than the scores of three of the four comparison cities (which range from 12.7 to 23.8). In part, neighborhood-level

[27]For example, Camden's G_s index of 0.249 is far below 0.345, which Jargowsky and Kim (2005) estimate as the average G_s index among the 25 largest metropolitan areas in 2000.

segregation by poverty is relatively low in Camden, because over a third of Camden's residents are poor.[28]

The Interaction Index (P* index), reported in the last row, shows that poor residents are less likely to share a neighborhood with nonpoor residents (63 percent) in Camden than in the comparison cities.

Taken together, the indices show that the principal dimension of income segregation in Camden is not the uneven assignment of households to neighborhoods (as shown by the relatively low H, G_s, and D indices), but the underrepresentation of higher-income households (reflected by the relatively low E score) and the subsequently low probabilities of interaction between poor and nonpoor Camden residents (as reflected in the P* index).

- Segregation is a problem that comes into clearest focus in the regional view, that is, among neighborhoods across the Camden city-suburban divide; among neighborhoods in Camden, segregation is low, primarily because disadvantaged residents are overrepresented.

Racial Segregation in the City of Camden and in the South Jersey Region

Map 4 illustrates racial/ethnic segregation at the neighborhood (or census tract) level across the South Jersey region in 2000.[29] Neighborhoods shaded in light grey are moderately diverse. Clusters of suburbs to the south and exurbs in the high-growth corridor (shown in white) are less diverse neighborhoods whose residents are primarily white. Clusters of neighborhoods in Pennsauken and the other outlying Burlington County municipalities of Fort Dix, Beverly, and Burlington City reflect the ethnic diversity of the region.

Table 11 shows the four indices of segregation by race for the City of Camden and the South Jersey region (including Camden) for 1990 and 2000. Not surprisingly, each of the indices points to higher levels of segregation in the region, that is, among neighborhoods across the city-suburban divide. Segregation among neighborhoods in Camden is fairly low. In Camden, the underrepresentation of white and middle-income residents is of greater concern than the uneven distribution of residents across neighborhoods.

Even though white residents are underrepresented, the E score, reported in the first row of Table 11, shows that the ethnic mix of Camden neighborhood residents in 2000 (0.620) was

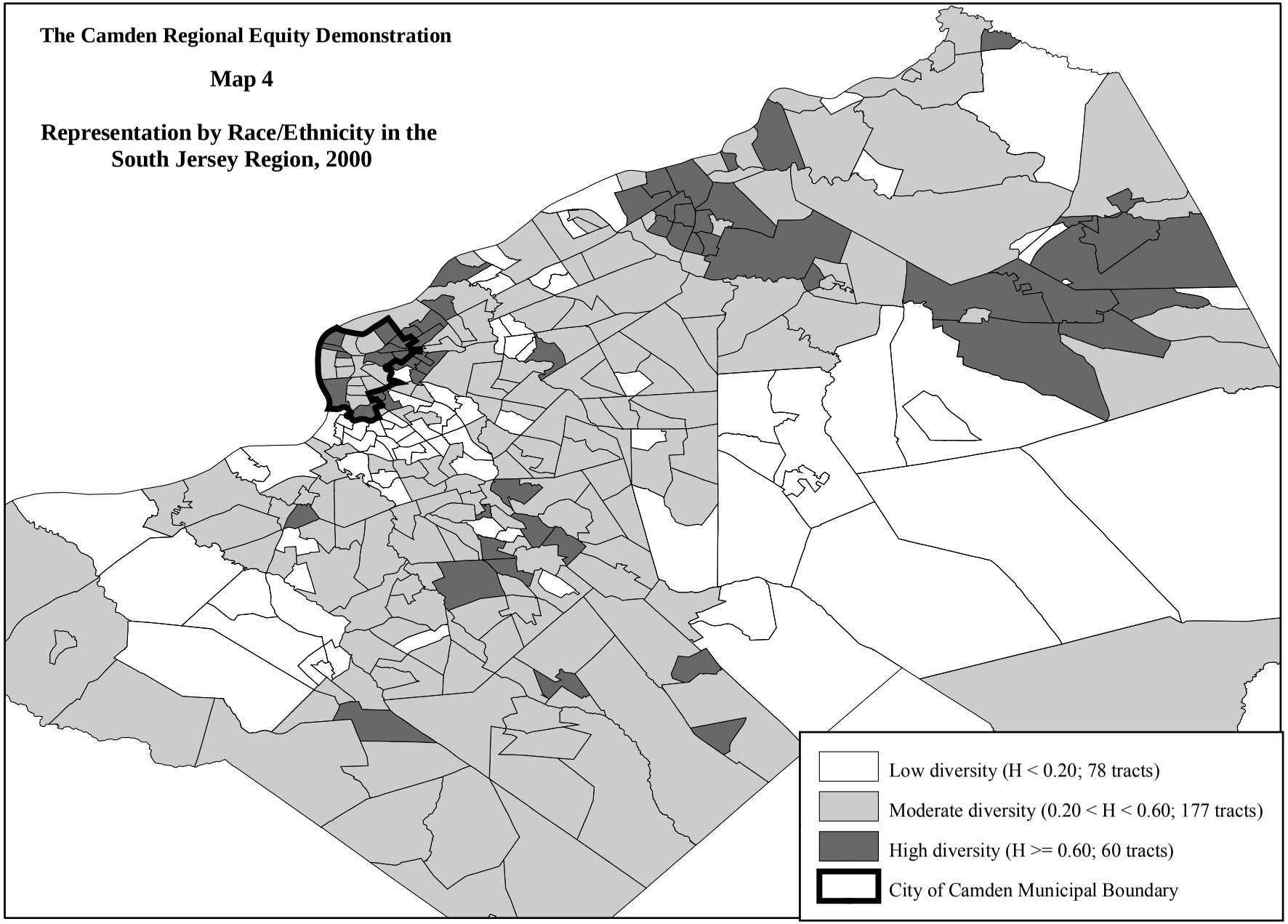
[28]In technical terms, this illustrates one of the limitations of the D index mentioned in Table 5; that is, it is not compositionally invariant.

[29]For ease of illustration, Maps 4 and 5 show the neighborhood H scores for racial and income segregation, while Table 10 reports the H index for metropolitan segregation by race/ethnicity and the Gini Index of Segregation for metropolitan segregation by income. See Appendix A for an explanation of the differences.

The Camden Regional Equity Demonstration

Map 4

Representation by Race/Ethnicity in the South Jersey Region, 2000



The Camden Regional Equity Demonstration

Table 11

Racial and Economic Segregation among Residents of Camden and the South Jersey Region, 1990 and 2000

	City of Camden		South Jersey Region	
	1990	2000	1990	2000
By race/ethnicity				
Diverse representation of the four major racial/ethnic groups[a]	0.611	0.620	0.321	0.390
Segregation among the four major racial/ethnic groups[b]	0.222	0.185	0.481	0.411
Segregation of black and white households[c]	50.3	46.5	73.2	65.8
Interaction of black and white residents[d]	9.0	6.2	69.1	59.3
By household income				
Diverse representation of the six household income classes[a]	0.687	0.647	0.898	0.905
Segregation of the six household income classes[b]	0.017	0.017	0.069	0.064
Segregation by income (continuous)[e]	0.285	0.249	0.447	0.414
Segregation of poor and nonpoor households[c]	21.5	13.9	41.5	37.3
Interaction of poor and nonpoor residents[d]	59.3	62.8	79.6	82.7

SOURCE: MDRC calculations from 1990 and 2000 census data.

NOTES: In 1990, the six categories of income are: very low income (less than 50 percent of the median household income, $19,660); low income (50-80 percent of the MHI, $19,660-$31,454), moderate income (80-100 percent of the MHI, $31,455-$39,317), moderately high income (100-120 percent of the MHI, $39,318-$47,180), high income (120-150 percent of the MHI, $47,181-$58,976), and very high income (greater than 150 percent of the MHI, or $58,976). Generally accepted procedures of linear and Pareto interpolation were used to estimate the proportion of households within given census income categories that fell above or below these income thresholds.

In 2000, the six categories of income are: very low income (less than 50 percent of the median household income, $26,831); low income (50-80 percent of the MHI, $26,831-$42,927), moderate income (80-100 percent of the MHI, $42,928-$53,659), moderately high income (100-120 percent of the MHI, $53,660-$64,391), high income (120-150 percent of the MHI, $64,392-$80,489), and very high income (greater than 150 percent of the MHI, or $80,489). Generally accepted procedures of linear and Pareto interpolation were used to estimate the proportion of households within given census income categories that fell above or below these income thresholds.

See appendix for detailed explanation of all scores and indices.

[a] Computed using the Multigroup Nominal Entropy Score (E score).

[b] Computed using the Multigroup Nominal Entropy Index (H index).

[c] Computed using the Dissimilarity Index (D index).

[d] Computed using the Interaction Index (P* index).

[e] Computed using the Gini Index of Segregation (G_s).

nearly twice as diverse as the mix of residents in neighborhoods throughout the region (0.390). Given its strong representation among Hispanic, black, and to a lesser extent, Asian residents, Camden was much more ethnically diverse than the region, even though white representation within Camden was low.

The H index, reported in the second row, shows that the uneven sorting of residents to neighborhoods accounted for only about 19 percent of the total ethnic diversity in Camden in 2000. In other words, about 81 percent of Camden's ethnic diversity was found in neighborhoods whose compositions were similar to those of the city. Only about 59 percent of the 2000 regional ethnic mix could be found in neighborhoods whose compositions were similar to those of the region. Conversely, 41 percent of the regional ethnic mix was found in neighborhoods that were more or less diverse than the region as a whole (such as Camden neighborhoods and majority white suburban neighborhoods, respectively).

As noted above, black and white Camden residents were less residentially segregated than their counterparts in many U.S. cities. The third row of Table 11 shows that Camden's relatively few white residents were fairly evenly represented across neighborhoods. In the South Jersey region, by contrast, two-thirds (66 percent) of the cumulative population of black and white residents would have needed to move to achieve an even residential distribution in 2000.

While the first three indices of segregation suggest that there are higher levels of ethnic diversity in Camden and more even residential settlement across Camden than in the region, the P* index indicates that black residents are less likely to share neighborhoods with white residents in Camden than they are in the region. Specifically, the fourth row shows that a randomly chosen black Camden resident had a 6 percent chance of sharing the same neighborhood with a randomly chosen white resident in 2000. Black residents in the region were more likely (59 percent) to share neighborhoods with white residents in 2000.

Income Segregation in the City of Camden and in the South Jersey Region.

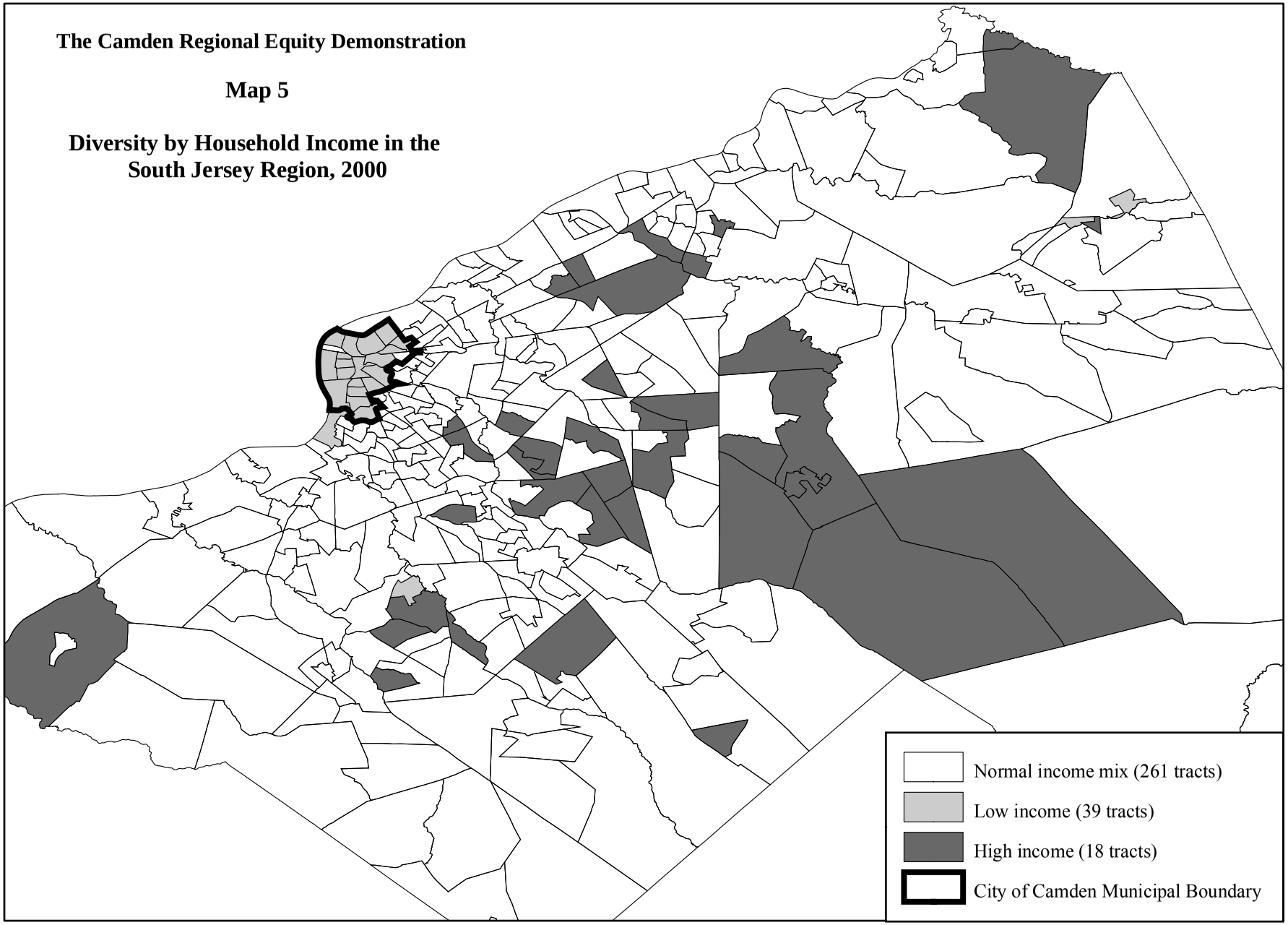
As is true of segregation by race, levels of neighborhood segregation by household income are much higher across the region (that is, among neighborhoods across Camden and the region) than among neighborhoods in Camden.

Map 5 identifies neighborhoods that were the least diverse with respect to household income in 2000. Within each neighborhood, households were divided into six income categories, following often used income categories relative to the median household income (MHI) of

The Camden Regional Equity Demonstration

Map 5

Diversity by Household Income in the South Jersey Region, 2000



the South Jersey Region in 2000, which was $53,660.[30] The neighborhoods shaded in light grey, almost all of which fall within the City of Camden, were among the poorest in the region. At least 75 percent of households in these neighborhoods had incomes below 80 percent of MHI, that is, less than $38,023. The neighborhoods shaded in dark grey, located primarily in the outer growth corridor, were among the wealthiest in the region. At least 75 percent of the households in these neighborhoods had incomes above 100 percent of MHI, that is, above $53,660.

The bottom panel of Table 11 presents the five indices of income segregation among neighborhoods in Camden and in the region. As mentioned above, the underrepresentation of higher-income households in Camden is reflected in its relatively low E scores (0.647), reported in the first row of the bottom panel. The corresponding score for the region (0.905) shows more balanced representation of the six income classes.

The H index, presented in the following row, shows that although neighborhood segregation by income is fairly low in both the city and the region, it is much higher in the region (0.064 vs. 0.017). Even so, 93 percent of the regional mix of households from the six income classes can be found in neighborhoods whose household income distributions are similar to those of the region.

The G_s index, presented in the third row of the bottom panel, shows a relatively low level of neighborhood segregation by household income, with slightly higher levels in the region than in the city (0.249 vs. 0.414).

The D index, reported in the fourth row of the bottom panel, shows that while less than a fifth (13.9) of Camden's residents would have needed to move to establish an even residential distribution of poor and nonpoor households in 2000, nearly two-fifths of residents (37.2 percent) would have needed to move to meet that goal for the region.

The P* index, reported in the bottom panel of Table 11, shows that poor residents are more often isolated from nonpoor residents in Camden than in the region. It shows that a poor resident selected at random in Camden has a 63 percent chance of sharing a neighborhood with a nonpoor resident. In the region, a poor resident selected at random has an 83 percent chance of sharing a neighborhood with a nonpoor resident.

[30]In 2000, the six categories of income were: very low income (less than 50 percent of median household income, $26,831); low income (50-80 percent of MHI, $26,831-$42,927); moderate income (80-100 percent of MHI, $42,928-$53,659); moderately high income (100-120 percent of MHI, $53,660-$64,391); high income (120-150 percent of MHI, $64,392-$80,489); and very high income (greater than 150 percent of MHI, or $80,489). Generally accepted procedures of linear and Pareto interpolation were used to estimate the proportion of households within given census income categories that fell above or below these income thresholds.

- Segregation by race and ethnicity declined over the decade on every measure except interaction, both in the city and across the region.

For example, the H index in the second row of Table 11 shows that between 1990 and 2000, neighborhood segregation by race/ethnicity declined from 0.222 to 0.185 in Camden, and from 0.481 to 0.411 in the South Jersey region. Over the decade, black residents were less likely to share neighborhoods with white residents, both in the city, where both populations declined, and in the region, where the white population declined.

- Segregation by household income declined modestly both in Camden and in the region.

Representation of residents from the six household income classes (E score) declined modestly in Camden (0.687-0.647), and residential segregation by household income (G_s index) also declined modestly in Camden (0.285 to 0.249). Segregation of poor from nonpoor residents declined significantly, however, both in Camden (21.5-13.9) and across the region (41.5-37.3). In addition, interaction among poor and nonpoor residents increased modestly in Camden (59.3-62.8) and in the region (79.6-82.7).

Outcomes for the South Jersey Region

This section reports on the two principal outcomes for residents and housing markets in the South Jersey region.

Residents

1. Growth and Equality: There was strong, sustained regional growth in total employment, net job flows, and earnings; in contrast, Camden's labor force participation rate declined.

As discussed above, at the regional level an increase in total employment is an important indicator of growth, and an important indicator of regional equality is the extent to which this growth results in higher levels of labor force participation among Camden residents. The Local Employment Dynamics partnership of the U.S. Census and New Jersey state employment agencies provides several quarterly workforce indicators that are useful for gauging the strength of the South Jersey labor market.

Figure 7 shows sustained, if modest, quarterly growth in total employment in the South Jersey region between 1997 and 2006. Job growth is always dynamic, as some employers add job openings and others scale back. Figure 8 shows the quarterly net job flows resulting from these job gains and losses across all of the businesses in the South Jersey region over the decade. While

The Camden Regional Equity Demonstration

Figure 7

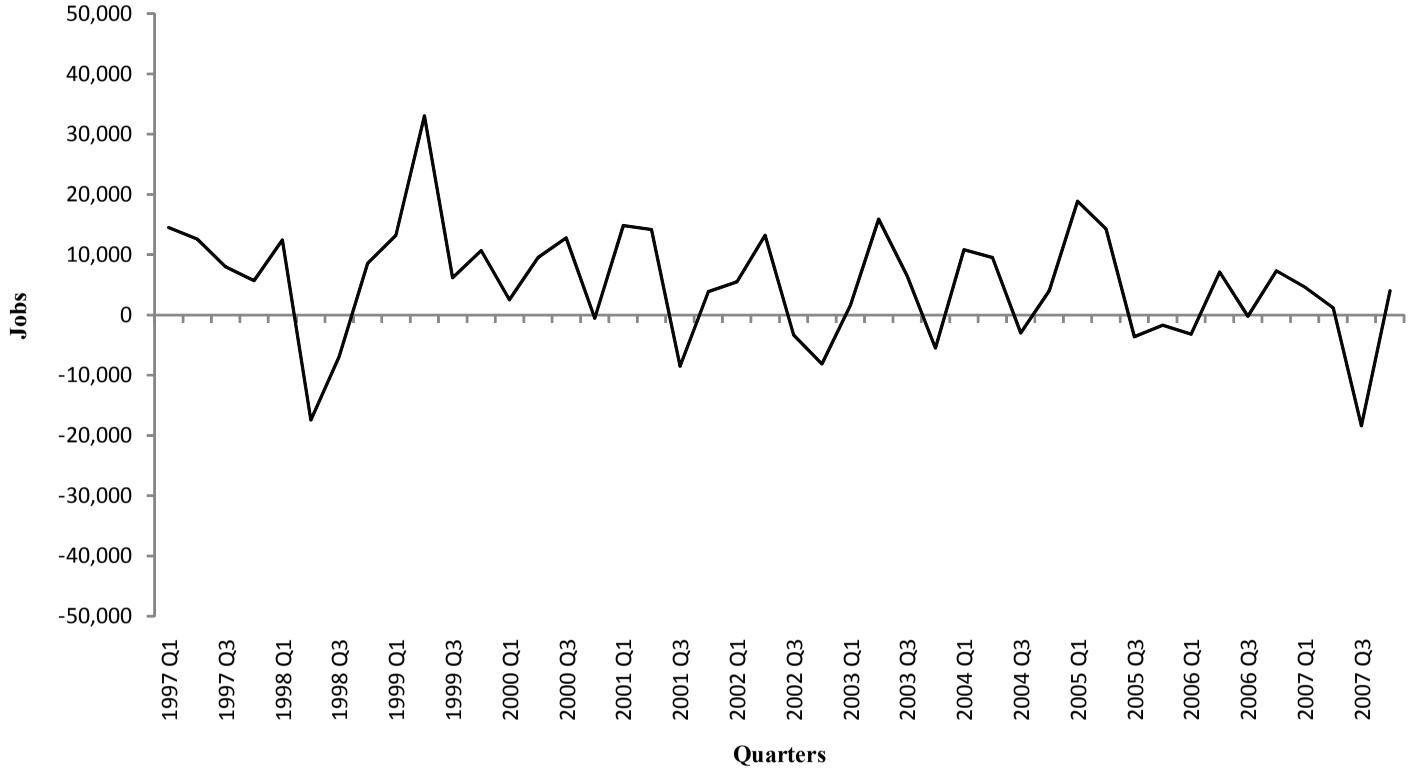
Total Quarterly Employment in the South Jersey Region, 1997-2006

SOURCE: Local Employment Dynamics (LED) database.

The Camden Regional Equity Demonstration

Figure 8

Net Quarterly Job Flows in the South Jersey Region, 1997-2007



SOURCE: Local Employment Dynamics (LED) database.

some quarters saw net job losses, for example, the second quarter of 1998 and the third quarter of 2001, most quarters evidenced strong job gains. Average quarterly earnings among new hires increased modestly during the decade, from $5,444 (or $21,776 per year) in the second quarter of 1997 to $7,259 (or $29,036 per year) in the second quarter of 2006. (See Figure 9.) Despite this strong regional growth in employment, jobs, and new hires' earnings, the Camden labor force participation rate declined from 69 percent in 1990 to 63.8 percent in 2006, as noted in Table 2.

Housing Markets

This section of the paper extends the analysis of home purchase investments to the balance of the South Jersey region.

1. Growth: The 1992-2006 period was characterized by remarkable growth in regional HPC.

Figure 10 shows a sharp increase in the amount of HPC invested in the balance of the South Jersey region between 1992-1993 and 2005-2006. Indeed, the amount of HPC in the region nearly tripled, from $1.8 billion in the early 1990s to $5.0 billion in the mid-2000s. The number of approved mortgages more than doubled from nearly 12,000 to more than 26,500.

2. Equality: Growth in HPC was particularly strong among nonwhite home buyers, who began to claim their proportionate share of regional HPC.

Figure 11 shows sharp increases in regional HPC investments among black, Asian, and Hispanic households. Black households' HPC grew over 500 percent (from $103 million to $548 million), more than doubling black households' share of regional HPC from 6 percent to 11 percent. Hispanic households' HPC increased nearly ninefold (from $24 to $211 million), more than tripling Hispanic households' share of regional HPC from 1 percent to 4 percent. Asian households' HPC increased eightfold from $40 million to $273 million, increasing the share of Asian households' regional HPC from 2 percent to 5 percent. Taken together, the share of nonwhite households' regional HPC increased from 10 percent to 21 percent, much closer to the representation of nonwhite residents in the South Jersey region (27 percent).

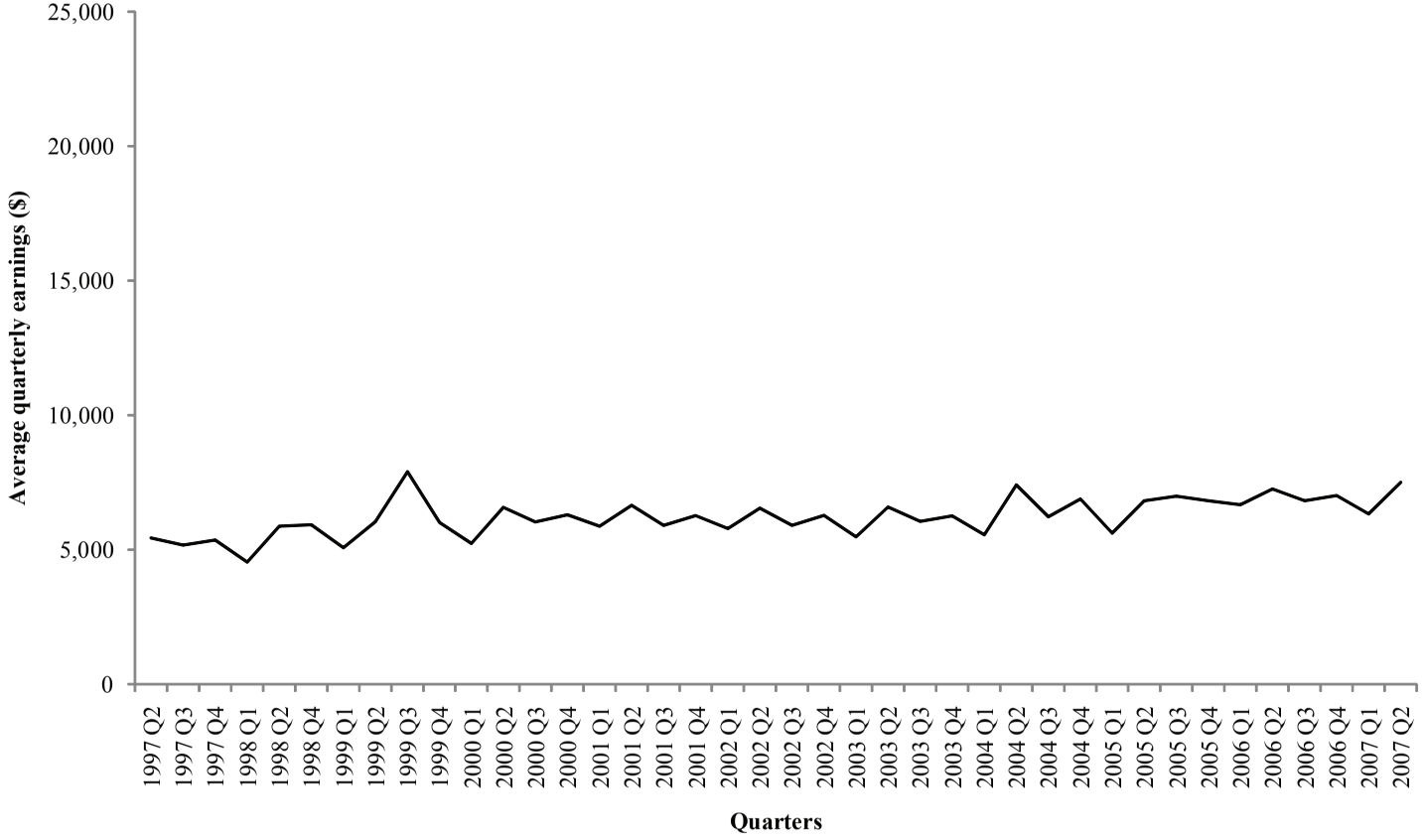
3. Equality: The share of regional HPC invested by low-income borrowers declined by 84 percent.

While people of color finally claimed their proportionate share of regional HPC, low-income borrowers lost almost their entire share. Figure 12 shows the sharp decline in the number of approved mortgage applications by low-income borrowers (those with incomes less than $30,000 in $2005) of 84 percent and from 16 percent to 3 percent of all approved mortgages.

The Camden Regional Equity Demonstration

Figure 9

Average Quarterly Earnings for New Hires in the South Jersey Region, 1997-2007

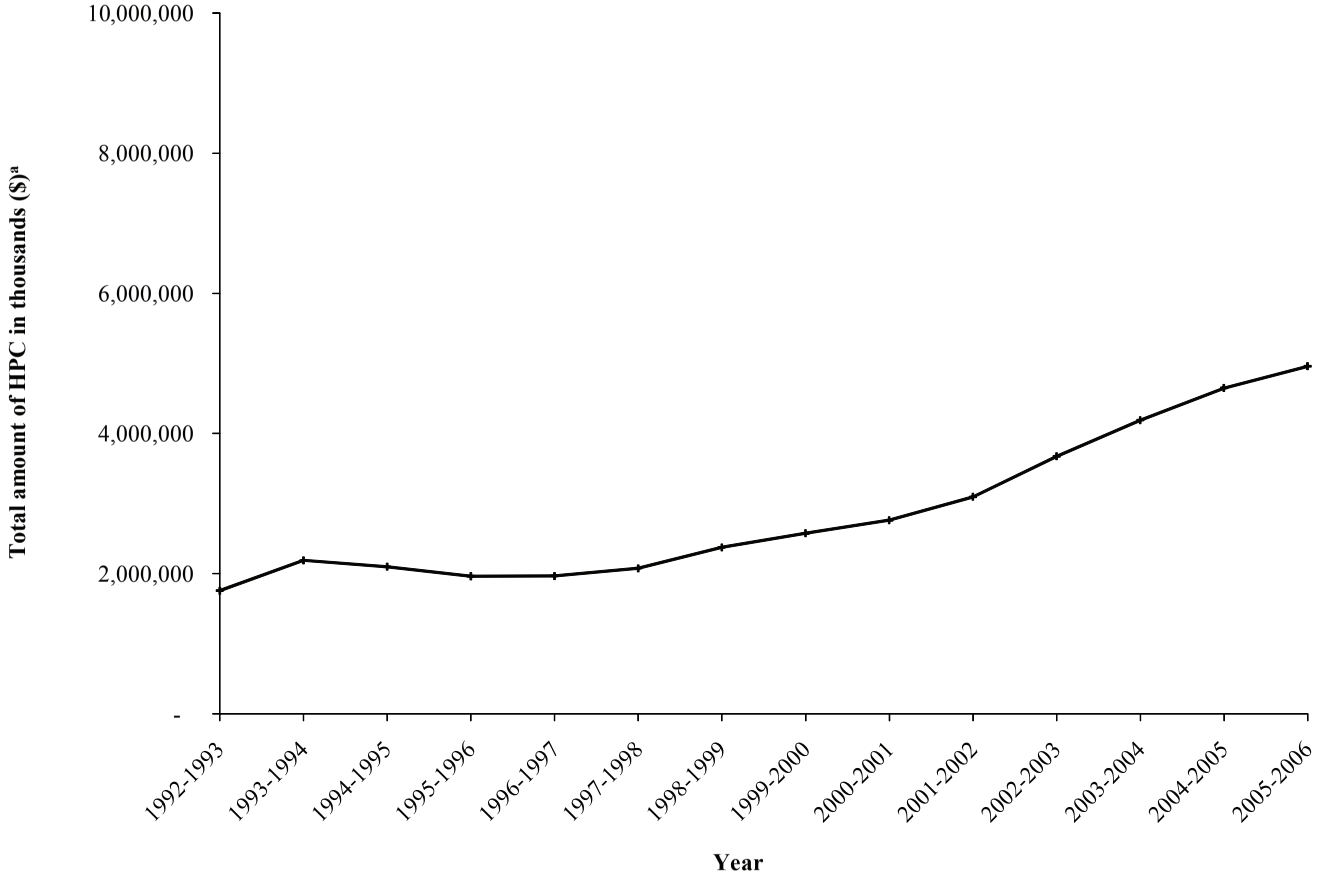


SOURCE: Local Employment Dynamics (LED) database.

The Camden Regional Equity Demonstration

Figure 10

Total Home Purchase Capital (HPC)
in the Balance of the South Jersey Region, 1992-2006



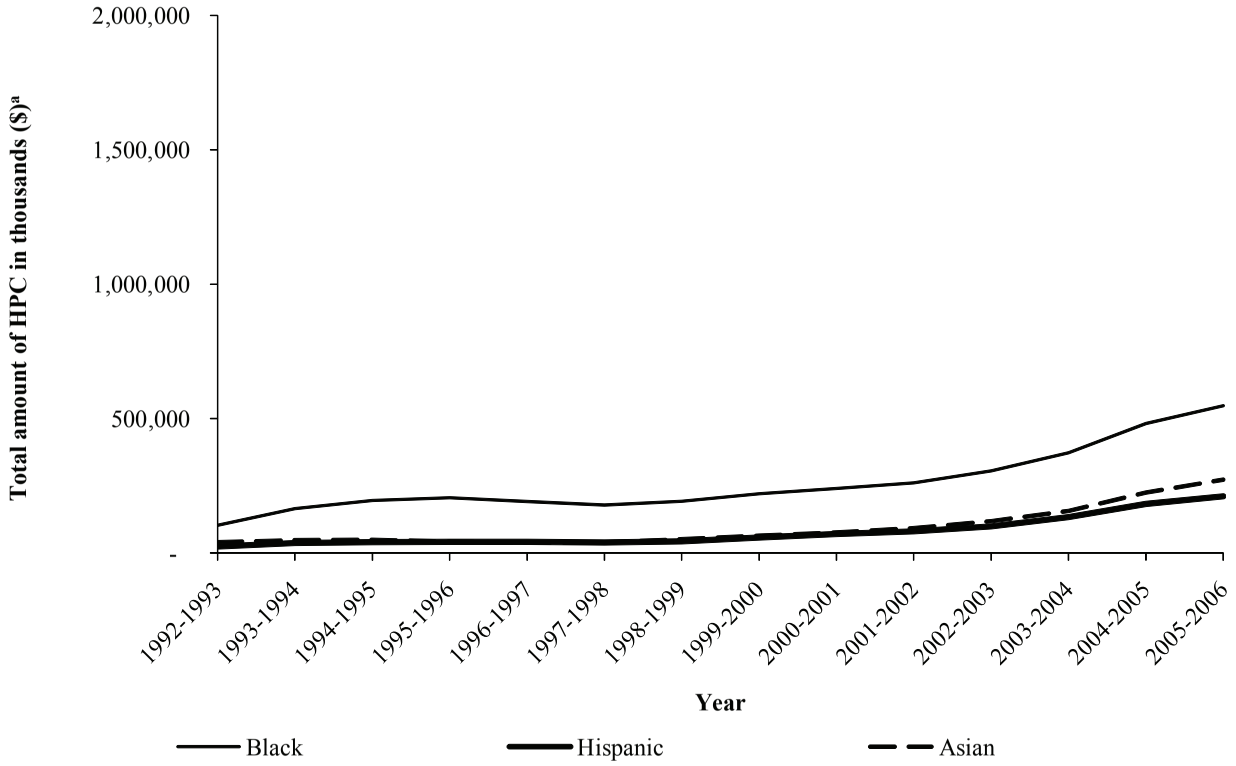
SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

NOTE: The balance of the South Jersey region includes values for the South Jersey region with the exception of the City of Camden.
[a]All dollar values have been normalized to 2006 dollars.

The Camden Regional Equity Demonstration

Figure 11

Home Purchase Capital (HPC) Among Nonwhite Home Buyers in the Balance of the South Jersey Region, 1992-2006



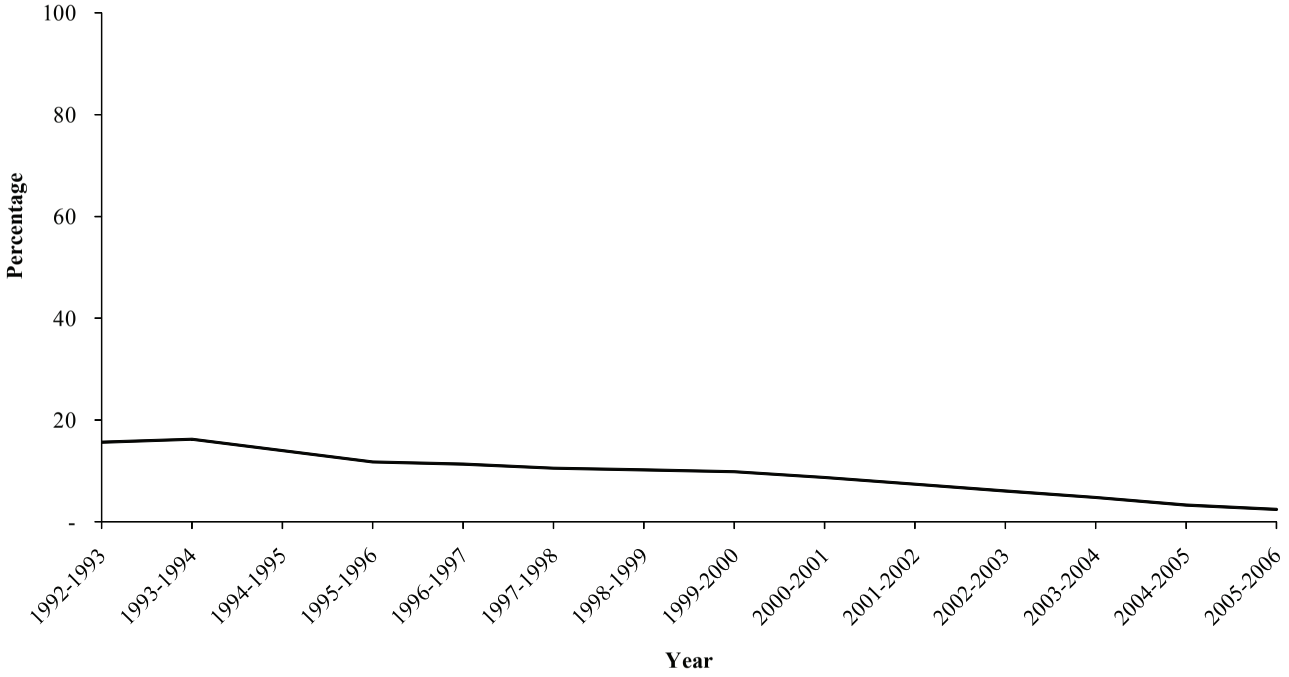
SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

NOTE: The balance of the South Jersey region includes values for the South Jersey region with the exception of the City of Camden.
[a]All dollar values have been normalized to 2006 dollars.

The Camden Regional Equity Demonstration

Figure 12

Approved Low-Income Borrowers as a Proportion of All Approved Borrowers in the Balance of the South Jersey Region, 1992-2006



SOURCE: Home Mortgage Disclosure Act data, 1992-2006.

NOTE: The balance of the South Jersey region includes values for the South Jersey region with the exception of the City of Camden.

As mentioned above, while low-income borrowers lost almost their entire share of the regional market, their share of the Camden market declined from 51 percent to 45 percent. Thus, while losing almost their entire share of the regional market, low-income borrowers maintained a two-fifths share of the Camden market.

4. Equality: Over the 15-year period, the region attracted homebuyers from a broad cross-section of the income distribution, and the distribution of home prices became more bimodal, with many homes selling for more and a few homes selling for less than in 1992-1993.

Some stakeholders argued that changes in the regional housing market were at least as important to Camden's future as changes within Camden, and maybe more so. The regionalists argued that ensuring an equitable distribution of affordable housing opportunities throughout the region was one of the best strategies for resolving the concentration of poverty and disinvestment suffered by cities like Camden. Implicitly, regionalists feared that without stronger enforcement of New Jersey's fair-share housing policies, low-income households would be crowded out of the market.

Over time, regional growth in home purchases was driven by buyers from a broad cross-section of incomes. Figure 13 plots the distributions of the income of applicants for approved primary home purchase mortgages in the South Jersey region in 1992-1993 with a dotted line and in 2005-2006 with a solid line. As mentioned above, the annual number of home purchases during this period more than doubled from nearly 12,000 to nearly 27,000. Figure 13 shows that this growth was driven by buyers from a broad cross-section of incomes (roughly $60,000 to $200,000).

Meanwhile, the distribution of home prices shifted toward the high end. Figure 14 plots the distributions of mortgage amounts in 1992-1993 with a dotted line and in 2005-2006 with a solid line. Growth was strong across a wide range of mortgage amounts. Growth in home purchases was particularly strong among homes priced between $200,000 and $500,000, and as in Camden, there was also growth at the lower end of the distribution, which for the region was the $20,000 to $60,000 range. Growth in home purchases was somewhat bimodal, with strong growth in more and less expensive homes, and a decline in the number of homes sold in the $90,000-$125,000 range.[31]

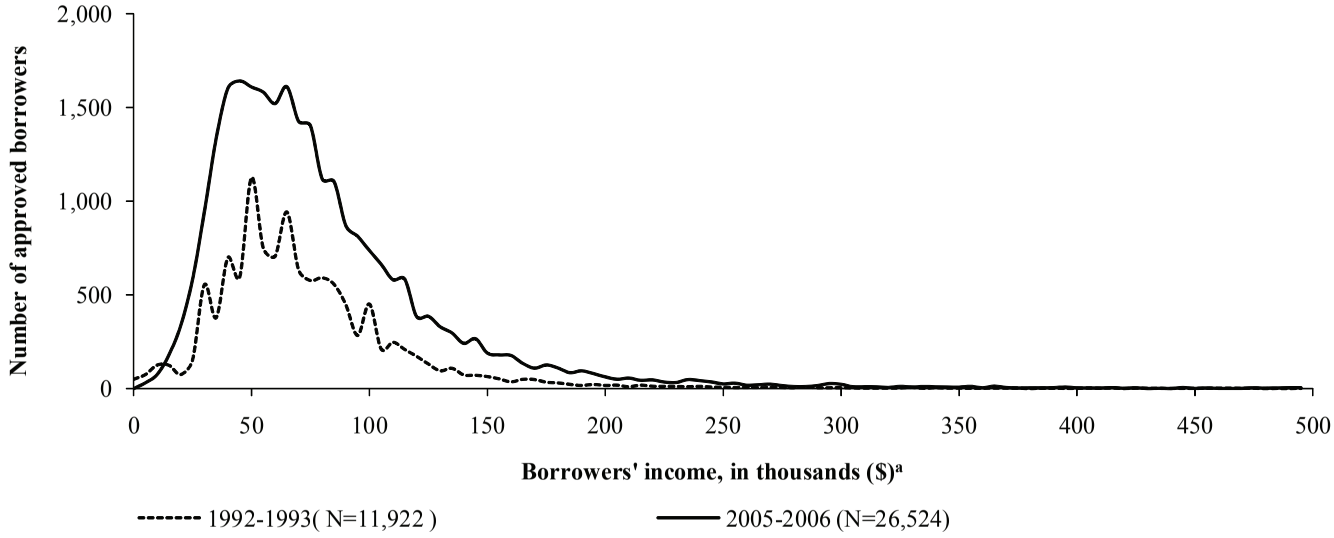
Over the 15-year period, the number of home purchases more than doubled. That increase was driven by buyers from a broad cross-section of incomes. There was strong growth in

[31]MDRC calculations based on HMDA data show that second liens accounted for a growing proportion of mortgages in the South Jersey region: 4.1 percent in 2004, 8.5 percent in 2005, and 10.1 percent in 2006.

The Camden Regional Equity Demonstration

Figure 13

Number of Approved Borrowers by Income in the Balance of the South Jersey Region, 1992-1993 and 2005-2006



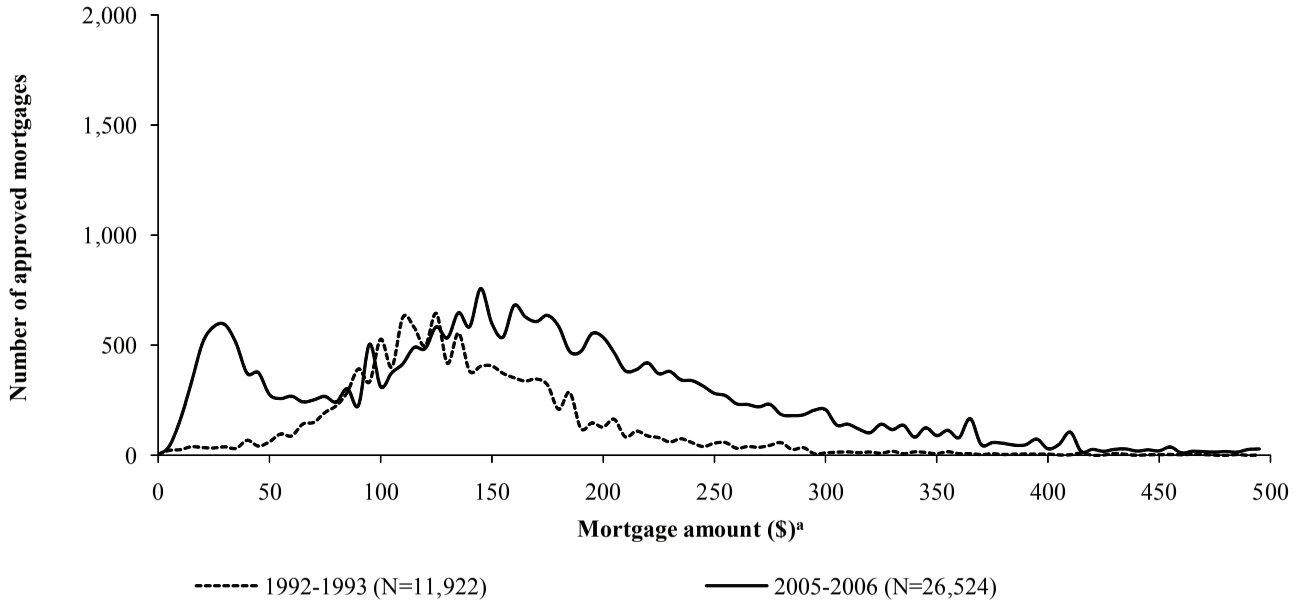
SOURCE: Home Mortgage Disclosure Act data, 1992, 1993, 2005, and 2006.

NOTE: The balance of the South Jersey region includes values for the South Jersey region with the exception of the City of Camden.
[a]All dollar values have been normalized to 2006 dollars.

The Camden Regional Equity Demonstration

Figure 14

Number of Approved Mortgages By Mortgage Amount in the Balance of the South Jersey Region, 1992-1993 and 2005-2006



SOURCE: Home Mortgage Disclosure Act data, 1992, 1993, 2005, and 2006.

NOTE: The balance of the South Jersey region includes values for the South Jersey region with the exception of the City of Camden.
[a]All dollar values have been normalized to 2006 dollars.

the number of homes sold across a broader range of prices, suggesting that the region still offered a fairly broad range of homes that sold for more than $140,000.

Conclusion

This paper offers a framework for understanding change among residents and housing markets in Camden and in the region as indicators of growth and equality. The indicators are created from census, HMDA, and labor market data. Application of this framework over the longer term will not provide conclusive evidence of the efficacy of particular redevelopment strategies, but it can provide a set of diagnostic benchmarks for measuring progress toward the dual goals of growth and increasing socioeconomic equality in Camden and the region. Actors involved in the highly contested process of redevelopment in Camden and the contentious process of advancing regional equality in the suburbs may emphasize different aspects of these two themes of growth and equality. However, a contribution of this paper is to bring these analytic lenses together to track progress toward goals for change in a way that may be relevant to many different stakeholders.

Despite its disadvantages, Camden offers an important oasis of homeownership opportunities for low-income households; on the other hand, there are indications of a growing problem of subprime lending, and critical needs for affordable housing remain.

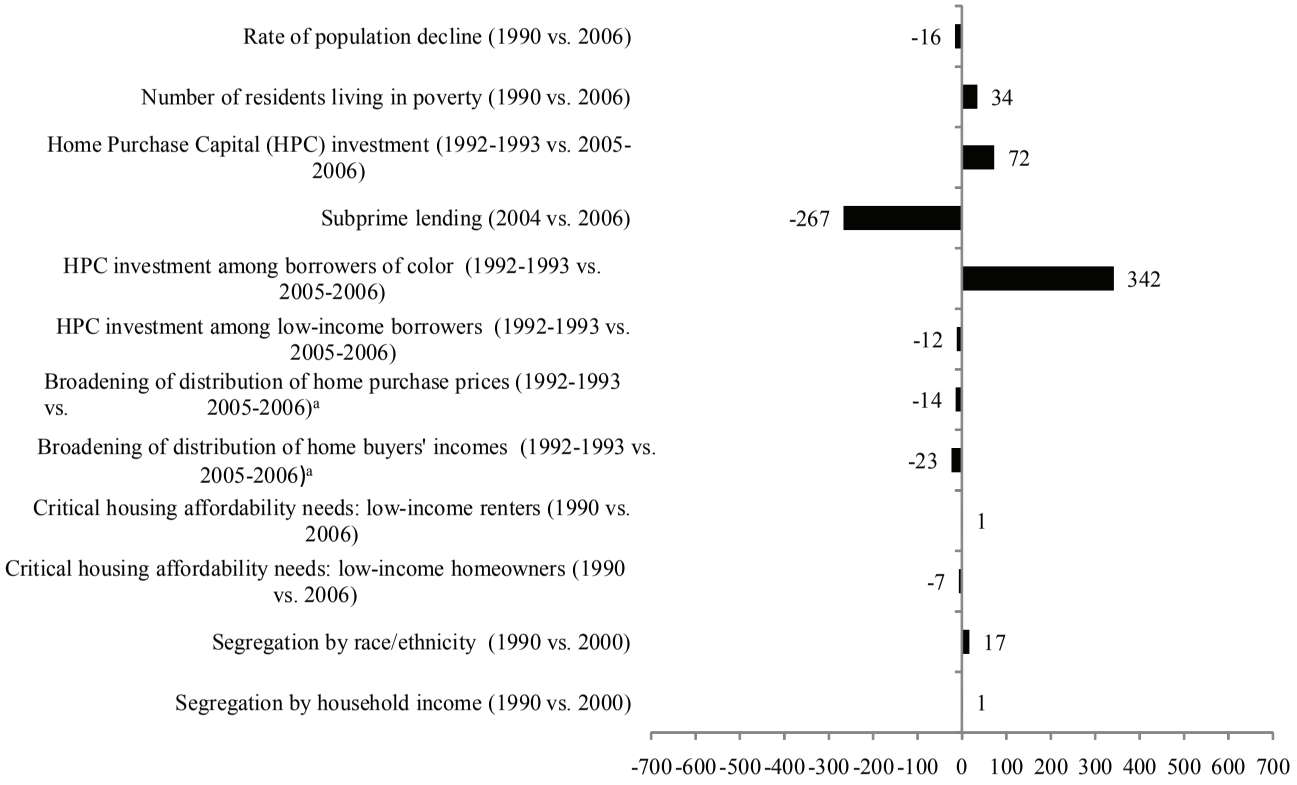
Figure 15 summarizes Camden's progress toward the 12 goals of the framework introduced above. The diagram is scaled so that changes to the right can be interpreted as favorable for Camden, and changes to the left as unfavorable. With respect to outcomes for residents, Camden achieved a 34 percent reduction in the number of poor residents over the 15-year period. The overall population continued to decline by 16 percent, however, and most likely diluted the impact on the individual poverty rate (which declined by only 10 percentage points, not shown in figure) and the family poverty rate (which declined by a mere 2 percentage points, not shown in figure).

Outcomes for housing markets were mixed. On the one hand, HPC investment increased among all buyers and especially among nonwhite home buyers. Critical needs for affordable housing declined among renters. Segregation, by race as well as income, is less acute across neighborhoods in Camden, if only because segregation on both dimensions is so severe across the city-suburban divide. Although one of Camden's strengths is the extent of affordable homeownership opportunities it offers to low-income families, the share of approved mortgages obtained by low-income borrowers declined modestly. Subprime lending, although a relatively low-incidence problem in Camden, increased substantially in the mid-2000s. Of perhaps most concern is growth in critical needs for affordable housing among low-income homeowners.

The Camden Regional Equity Demonstration

Figure 15

Progress Toward Growth and Equality in the City of Camden (Percentage Change)



SOURCES: U.S. Census data, 1990, 2000, 2006; American Community Survey, 2006; Home Mortgage Disclosure Act data, 1992-2006; Local Employment Dynamics (LED) database.

NOTE: [a]The interquartile range was employed as a measure of the breadth of the distribution of home purchase prices and home buyers' incomes.

Taken together, the indicators analyzed in this paper suggest that although Camden continues to offer an oasis of homeownership opportunities for low-income households, it continues to lose residents, and although poverty declined during the economic expansion of the late 1990s, many Camden households have low incomes. The analysis of HMDA lending patterns suggests that the trend is toward growth in home purchases among a slightly broader cross-section of homebuyers. It may be that by capitalizing on its competitive advantage, Camden can attract home purchase investment from relatively low-income (but credit-worthy) borrowers, while advocating for growth in affordable rental opportunities in the region.

In the early 2000s, the tide of employment and homeownership opportunities was rising across the South Jersey region, drawing in nonwhite home buyers and reducing historic segregation by race; the remaining challenges are to help these households preserve these gains, while increasing affordable rental housing in the region and ensuring that residents of Camden can take advantage of employment growth.

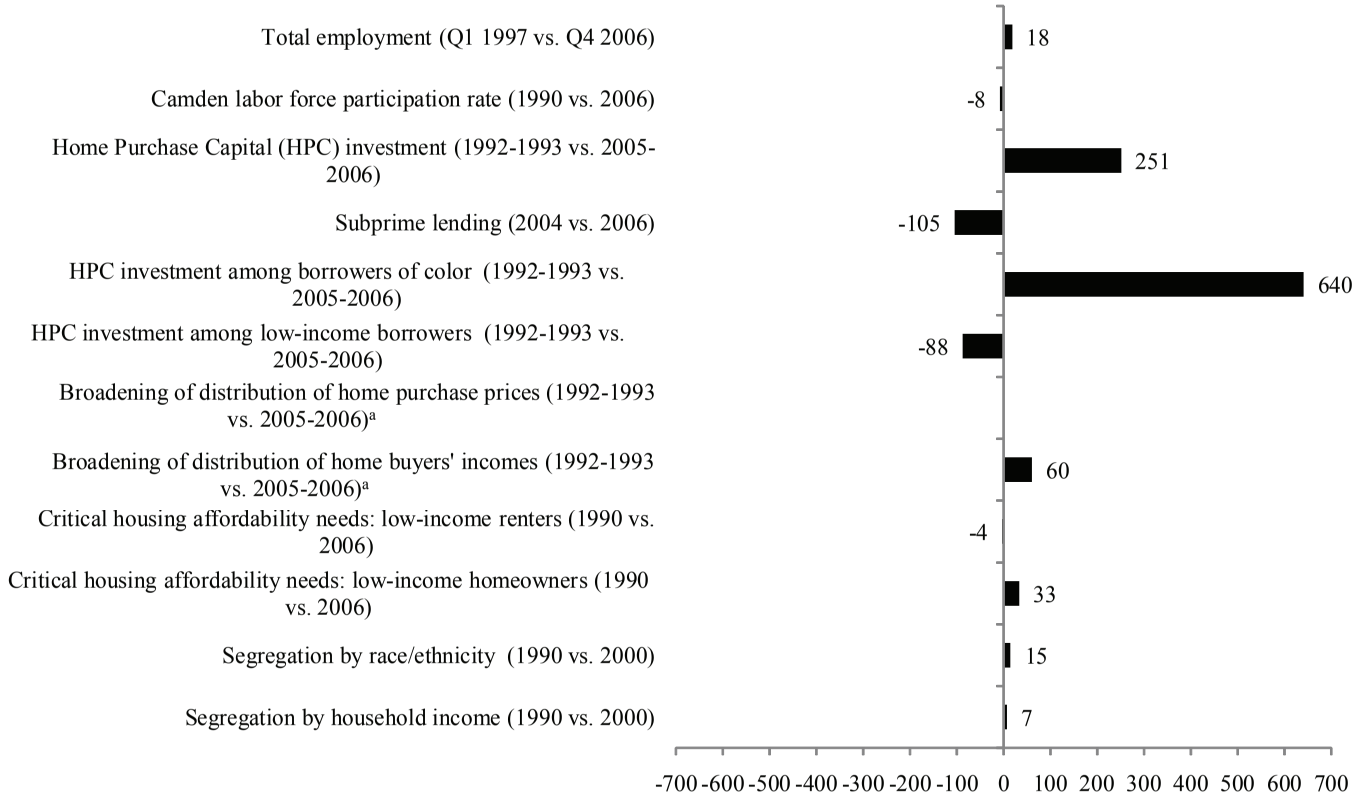
Figure 16 summarizes progress toward the redevelopment goals articulated for the South Jersey region. In contrast to Camden, outcomes for residents were favorable in terms of growth but less so in terms of socioeconomic equality. Despite an 18 percent increase in total regional employment, the Camden labor force participation rate *declined* by 8 percent. On the other hand, regional growth in HPC was strong, particularly among nonwhite borrowers, whose investments increased by more than 600 percent. The region achieved substantial declines in segregation by race and moderate declines in segregation by household income, but there is much room for improvement on both dimensions. Subprime lending increased sharply in the mid-2000s, however, and low-income borrowers lost almost their entire share of HPC investments.

During the unprecedented growth of the late 1990s and 2000s, the key challenges for the South Jersey region may have been to ensure that low-income residents in Camden and elsewhere were able to take full advantage of expanding opportunities for employment and home ownership. In the recession of the late 2000s, it will be crucial to monitor subprime lending, to help homeowners restructure their debt while preserving their investment, and to provide an adequate supply of affordable housing, particularly rental housing.

The Camden Regional Equity Demonstration

Figure 16

Progress Toward Redevelopment Goals in the South Jersey Region (Percentage Change)



SOURCE: U.S. Census data, 1990, 2000, 2006; American Community Survey, 2006; Home Mortgage Disclosure Act data, 1992-2006; Local Employment Dynamics (LED) database.

NOTE: [a]The interquartile range was employed as a measure of the breadth of the distribution of home purchase prices and home buyers' incomes.

Appendix A

This appendix offers formal definitions of the four segregation indices introduced in Table 5 and employed in the second section.

The Multigroup Nominal Entropy Score (E score)

Object. The Multigroup Nominal Entropy Score (E score) helps to gauge the diversity of neighborhood representation of two or more categorically defined populations, such as ethnic groups or household income classes.

Formal Definition. The E score for a given metropolitan area is formally defined as:

$$E = \sum_{r=1}^{r} (\Pi_r) \ln [1/\Pi_r]$$

where Π_r represents a particular racial/ethnic group's proportion of the whole metropolitan area population. The inverse of each group's proportion of the total population is weighted by its natural log. This transformation ascribes the maximum E values to subgroups that account for a proportionate share of the entire population. The logarithmic transformation of the inverse inflates the scores of underrepresented populations, while deflating the scores of overrepresented populations..

Range and interpretation. E ranges from a minimum of 0, when the area is entirely comprised of one of the groups, and a maximum of ($_{log}$r) (the optimal score), when each of the constituent groups is equally represented.

Strengths and limitations. The E score is useful for comparing the existing level of diversity against the ideal, or most equitable, distribution. To use a playing card analogy, E measures the existing hand dealt against a perfectly balanced dealt hand.

The hand dealt, however, is a result of two factors — the cards in the deck and the deal (or sorting). One of the weaknesses of measures of evenness, like E, is that they do not take the composition of the deck, that is, the overall population composition, into account. For example, knowing that face cards (King, Queen, Jack) make up only 23 percent of a regular playing deck (12 out of 52 cards), most card players would not expect to be dealt an even number of face cards and numbered cards.

As one analyst explains it, the E score "describes the *diversity* in a metropolitan area…This is typically not referred to as a measure of 'segregation' because it does not measure

the distribution of these groups across a metropolitan area. A metropolitan area, for example, can be very diverse if all minority groups are present, but also very highly 'segregated' if all groups live exclusively in their own neighborhoods."[32]

Nevertheless, the E score can be used to compare the relative evenness of different metropolitan areas with similar compositions (that is, deals from similar decks). For example, Table 11 shows that drawing from the same four population subgroups, Camden's population is more diverse (.0620) than Trenton's (0.568).

The Multigroup Nominal Entropy Index (H index)[33]

Object. The Multigroup Nominal Entropy Index (H index), also called Theil's H, measures the segregation, or sorting, of metropolitan population subgroups into neighborhoods. The H index enhances the information provided by the E score by isolating the impact of neighborhood sorting from the overall metropolitan population composition.

Formal definition. The H index is calculated in two steps. The first step is to calculate the E score for the metropolitan region, as defined above, and to multiply this score by the total metropolitan population. This provides a measure of total diversity, or to return to the playing card analogy, the composition of the deck. The second step is to calculate the average tract-level deviation from overall metropolitan diversity (E) weighted by each tract's population. The H index measures neighborhood-level segregation by evaluating the result of the second step as a proportion of the first, that is, the relative diversity of the average "deal" relative to the diversity in the "deck." Formally, H is defined as:

$$H = \sum_{i=1}^{n} [\, t_i(E - E_i) \div (ET) \,]$$

where t_i represents each tract's population, E is the metropolitan Entropy Score, E_i is the tract-level Entropy Score, and T is the total metropolitan population.

Range and interpretation. The H index takes a minimum value of 0 (the optimal score), when there is no average difference between the composition of neighborhoods and the composition of the metropolitan area; in other words, each group is equally represented across neighborhoods, on average. Conversely, the H index takes on its maximum value of 1 when each subgroup is completely consigned to separate, homogenous enclaves.

[32]Iceland, 2004, p. 8.
[33]Iceland, 2004.

Strengths and limitations. Ultimately, as discussed above, neighborhood-level diversity is determined by two factors — the mix of population subgroups that live in the metropolitan area as well as the sorting of households into neighborhoods, or neighborhood-level segregation. The H index is most useful for isolating the contribution of neighborhood segregation, or sorting, to the overall diversity recorded by the E score. However, because neighborhood sorting is typically less of a contributor to absolute neighborhood diversity than the metropolitan composition, it is often most informative to calculate both measures.

The Dissimilarity Index (D index)

Object. The Dissimilarity Index (D index) can be interpreted as the proportion of total metropolitan residents who would need to change neighborhoods to achieve an even distribution of population subgroups across neighborhoods.

Formal Definition. The D index is formally defined as:

$$D = \sum_{i=1}^{n} [0.5 * | (a_i \div A) - (b_i \div B) |]$$

where a_i is the population of subgroup a residing in tract I, and A is the total metropolitan population of this subgroup. Similarly, b_i is the population of subgroup b residing in tract i, and B is the total metropolitan population of this subgroup.

Range and interpretation. The D index takes on a value of 0 (the optimal score) when each of the two subgroups are equally represented, on average, across tracts. For example, if one-fifth of the members of subgroup a and one-fifth of the members of subgroup b reside in a particular tract i, the contribution of tract i to the metropolitan D index will be 0. Conversely, consider a metropolitan region with two neighborhoods, t_1 and t_2,and two subgroups, a and b. If all of the members of subgroup a and none of the members of subgroup b reside in a particular tract i_1, then the contribution of this tract to the metropolitan D index would be 0.5 (that is, 0.5 * 1). By definition, all of the members of subgroup b would be equally segregated in tract i_2, the contribution of tract i_2 would also be equal to 0.5 and the metropolitan D index would equal 1.

Strengths and limitations. The D index is one of the most common and longstanding binary, categorical indices of neighborhood segregation. It is also one of the most intuitive. In a comprehensive factor analysis of several contending measures of the "evenness" dimension of segregation, Massey and Denton conclude that the "choice of an evenness measure is simple…little information is contained in any of the other candidates not already in the dissimilarity index. It has been the mainstay of segregation research for thirty years…It also has the advan-

tages of being easy to interpret and to compute."[34] The D index is limited, however to two group comparisons.[35]

The Interaction Index (P* index)

Object. The Interaction Index (P* index) can be interpreted as the probability that a randomly selected member of one group shares a neighborhood (census tract) of residence with a randomly selected member of another group.

Formal definition. The P* index is formally defined as:

$$P = \sum_i q_i [y_i / t_i]$$

where q_i represents the share of a given subpopulation (for example all white residents) living in census tract i; y_i is the number of persons not in the specified subpopulation living in census tract i; and t_i is the total population of census tract i. The P-index "is the minority-weighted average of each census tract's majority proportion."[36] In the two-group comparison, 1-p can be interpreted as in index of isolation, with a higher value meaning more isolation. This index is sensitive to the relative size of the minority group.

Range and interpretation. The P* index takes on a value of 0, when none of the members of either group share neighborhoods. Conversely, the P* index takes on a value of 1, the optimal score, when two populations are found in every neighborhood.

Strengths and limitations. Like the D index, the P* index is common in part because of its intuitive appeal. Although it is often correlated with the D index, the P* index is a measure of exposure, while the D index is a measure of evenness. [37] While the D index reflects how evenly two groups are distributed across neighborhoods, the P* index measures how likely they are to share a neighborhood. As a measure of the probability of interaction between two or more groups, however, the P* index is inherently sensitive to the relative size of the two groups.

[34]Massey and Denton, 1988, p. 308.
[35]Although the D index has been modified for applications to three or more groups, Massey and Denton recommend using the H index for multigroup comparisons.
[36] Massey and Denton, 1988.
[37] Massey and Denton, 1988.

The Gini Index of Segregation (G_s)

Object. The Gini Index of Segregation (G_s) is suitable for gauging neighborhood segregation on a continuous variable, like income. The G_s measures the proportion of variation in income *between individual households* that can be explained by the variation in average income across neighborhoods.

Formal definition. The Gini Coefficient of Income Inequality (G_i) is often used to measure the equality of the income distribution across households. Essentially, the G_i measures the discrepancy between the existing income distribution and a perfectly equal distribution of income across all households.[38]

Figure A.1 illustrates the basic logic of the G_i. All households are sorted by household incomes along the x axis from the lowest to the highest, and the cumulative distribution of income is plotted on the y axis. If all households had an equivalent share of income, there would be a 1 to 1 correspondence between the cumulative number of households on the x axis and the cumulative proportion of income on the y axis. The cumulative proportion of income would trace the 45 degree, dotted "line of equality." Typically however, lower income households receive less, and higher income households more than their proportionate share of the cumulative income distribution, and the relationship between the two distributions tracks what is called the "Lorenz curve." The G_i. measures the area between the line of equality and the Lorenz curve.

The G_s employs the same logic to gauge the degree to which the variation in income across neighborhoods explains the variation in income among households. It is formally defined as:

$$G_s = \quad G_n = \quad \frac{1 - \sum (Y_{ni-1} + Y_{ni})(H_i - H_{i-1})}{G_i \qquad 1 - \sum (Y_{i-1} + Y_i)(H_i - H_{i-1})}$$

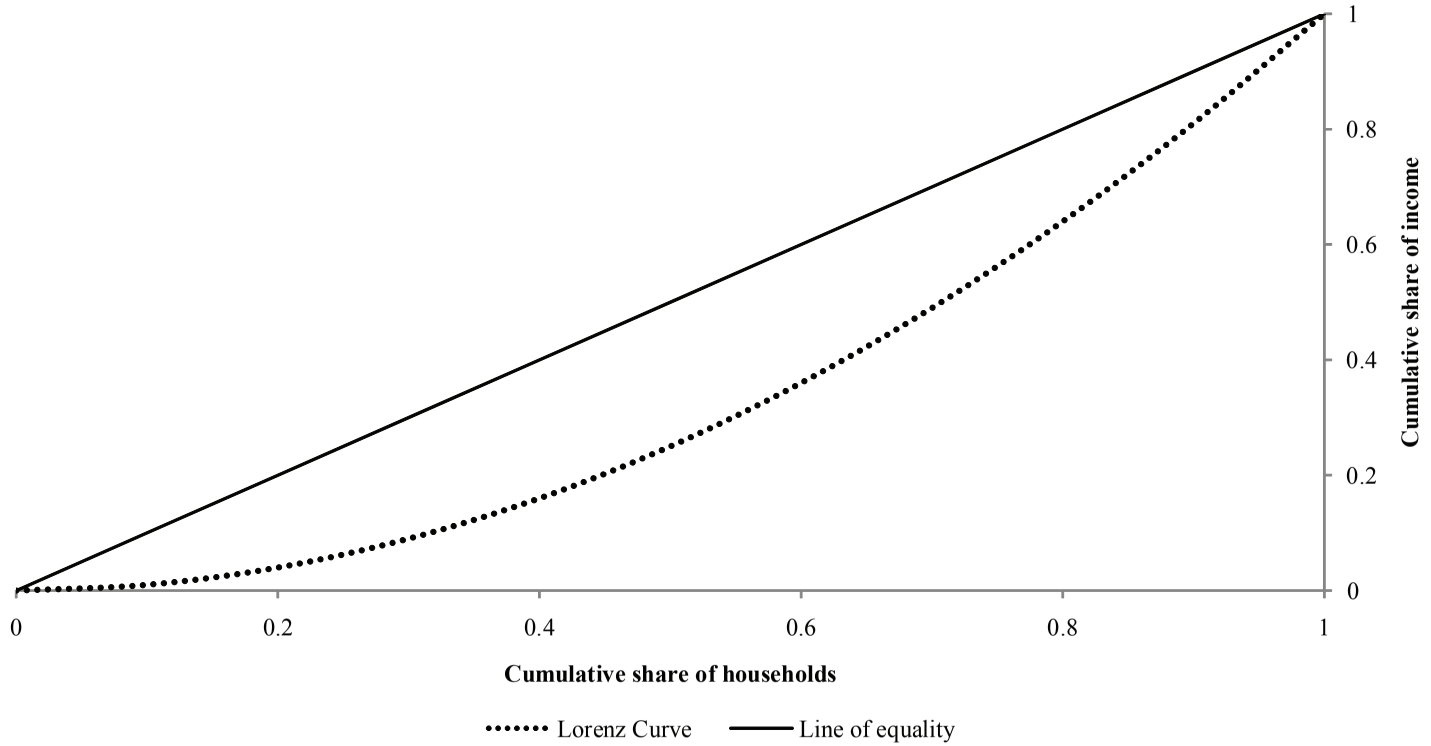
The denominator, the G_i, is calculated as explained above. All households are ranked in ascending order by income. For each income increment, for example \$0-\$5,000, the proportion of total household income within the band ($Y_{i-1} + Y_i$) is weighted by the number of households that fall within the band ($H_i - H_{i-1}$). Thus, Y_i and H_i represent the cumulative percentages of income and number of households at the ith household.

[38]The Gini Coefficient is widely recognized as one of the best available measures of the distribution of a continuous, interval-level attribute like income, and one of the only indices that satisfies the principles of transfers, compositional invariance, size invariance, and organizational equivalence. See Kim and Jargowsky, 2005, and Massey and Denton, 1988.

The Camden Regional Equity Demonstration

Figure A.1

Illustration of the Logic of the Gini Index of Segregation



NOTE: If all households had an equivalent share of income, there would be a 1 to 1 correspondence between the cumulative number of households on the x axis and the cumulative proportion of income on the y axis. The cumulative proportion of income would trace the 45-degree, dotted "line of equality." Typically, however, lower-income households receive less, and higher income households more than their proportionate share of the cumulative income distribution, and the relationship between the two distributions tracks is what is called the "Lorenz curve." The Gini Index of Segregation measures the area between the line of equality and the Lorenz curve.

Similarly, the numerator, the Gini Coefficient of Neighborhood Inequality, is calculated by ranking all neighborhoods, (in this case census tracts), in ascending order, by average household income. As above, for each income increment, the proportion of neighborhoods with average household income falling within the band ($Y_{i-1} + Y_i$) is multiplied by the number of neighborhood resident households that fall within the band ($H_i - H_{i-1}$). Thus Y_{ni} is the cumulative percentage of average household income of the neighborhood in which the ith household resides.

Range and interpretation. If households were assigned to neighborhoods on the basis of income, such that every household with an income of $50,000 income lived in one neighborhood, and every household with $30,000 lived in another neighborhood, etc., the G_s would be equal to 1, suggesting complete segregation. Conversely, if households were assigned to neighborhoods such that each neighborhood was just as diverse with respect to income as the metropolitan area, the G_s would be 0. The vast majority of metropolitan American neighborhoods include a fairly broad mix of household incomes, with a G_s much lower than 0.5.[39]

Strengths and limitations. The principal advantage of the G_s is that because it treats income as a continuous variable, it enables analysts to measure the effects of household-to-neighborhood sorting (segregation) to the overall variance in household income. While categorical indices, like the D index, are useful for a first glance at segregation of broad classes of households (such as poor vs. nonpoor households), the G_s provide a more complete assessment of segregation by income across the entire spectrum of household incomes. For example, given Camden's disproportionate poverty, segregation between poor and nonpoor households is fairly low in Camden relative to other distressed cities (13.9 vs. 17.3-23.8); the G_s shows that neighborhood segregation by household income is nevertheless higher than in other distressed cities (0.096 vs. 0.030-0.080).

Nevertheless, because census household income data are limited to counts of households falling into fairly broad categories, analysts must interpolate the incomes of individual households, and this interpolation is necessarily imprecise.

Following Berube and Tiffany, 2004, this analysis employs linear interpolation to estimate the number of households at each income threshold within bounded reported categories and Pareto interpolation to estimate household income from unbounded, reported categories.

Y = Income at percentile of interest

P = Percentile of interest

a = The income value at the lower limit of the category containing P

[39] Jargowsky, 1997.

b = The income value at the upper limit of the category containing P
P_a = Proportion of the distribution that lies below the lower limit
Pb = Proportion of the distribution that lies below the upper limit

Linear Interpolation

$$P = \frac{(Y-a)}{(b-a)} \times (P_b - P_a) + P_a$$

Pareto Interpolation

$$\Theta = \left(\frac{\ln(1-P_a) - \ln(1-P_b)}{\ln(b) - \ln(a)} \right)$$

$$k = \left(\frac{P_b - P_a}{\left(\frac{1}{a^{\Theta}} - \frac{1}{b^{\Theta}} \right)} \right)^{\frac{1}{\Theta}}$$

$$P = 1 - \left(\frac{k}{Y} \right)^{\Theta}$$

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About MDRC

MDRC is a nonprofit, nonpartisan social policy research organization dedicated to learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

Founded in 1974 and located in New York City and Oakland, California, MDRC is best known for mounting rigorous, large-scale, real-world tests of new and existing policies and programs. Its projects are a mix of demonstrations (field tests of promising new program approaches) and evaluations of ongoing government and community initiatives. MDRC's staff bring an unusual combination of research and organizational experience to their work, providing expertise on the latest in qualitative and quantitative methods and on program design, development, implementation, and management. MDRC seeks to learn not just whether a program is effective but also how and why the program's effects occur. In addition, it tries to place each project's findings in the broader context of related research — in order to build knowledge about what works across the social and education policy fields. MDRC's findings, lessons, and best practices are proactively shared with a broad audience in the policy and practitioner community as well as with the general public and the media.

Over the years, MDRC has brought its unique approach to an ever-growing range of policy areas and target populations. Once known primarily for evaluations of state welfare-to-work programs, today MDRC is also studying public school reforms, employment programs for ex-offenders and people with disabilities, and programs to help low-income students succeed in college. MDRC's projects are organized into five areas:

- Promoting Family Well-Being and Child Development
- Improving Public Education
- Promoting Successful Transitions to Adulthood
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

Working in almost every state, all of the nation's largest cities, and Canada and the United Kingdom, MDRC conducts its projects in partnership with national, state, and local governments, public school systems, community organizations, and numerous private philanthropies.