

## Slum Clearance and Urban Renewal in the United States, 1949-1974

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Abstract: Title I of the Housing Act of 1949 established a federally subsidized program that helped cities clear areas of existing buildings for redevelopment, rehabilitate deteriorating structures, complete comprehensive city plans, and establish and enforce building codes. The program ended in 1974, but not before financing over 2,000 urban renewal projects and generating great controversy. We use an instrumental variable strategy to measure the effects of urban renewal funding on several city-level labor market and housing market outcomes. The preliminary results indicate that the program had positive and economically significant effects on a number of outcomes. We caution that the results do not imply that urban renewal, as implemented under Title I, was an equitable or optimal approach to dealing with central-city problems.

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## 1. Introduction

In Title I of the National Housing Act of 1949, the United States Congress launched an ambitious plan to rid American cities of their slums and to revitalize central-city economies. Policymakers hoped that local government agencies, with federal financial assistance and state-delegated powers of eminent domain, could assemble, clear, and then sell parcels of land in “blighted” urban areas for redevelopment. The goals of Title I were broad: to reduce “substandard” housing that was considered a breeding ground for crime and vice; to stem suburban migration; to invigorate downtown central business districts; to increase local tax revenues through property value gains; and to encourage new private investment (Groberg 1968, Teaford 2000). In practice, Title I was a far-reaching, hands-on, 25-year effort to boost the economic prospects of central cities.<sup>1</sup>

The program was launched with broad political support against a backdrop of deep concern about the economic health of America’s cities and the quality of the housing stock. Both major political parties endorsed the goal of slum clearance and urban renewal in their platforms for the 1948 presidential election. Over time, however, urban renewal efforts became increasingly controversial.<sup>2</sup> Critics decried the disproportionate impact on poor residents, the use of eminent domain to trump private property rights, the destruction of cohesive neighborhoods, the loss of historic buildings, and the aesthetics of the new buildings (Jacobs 1961, Anderson 1964, Gans 1965, Wilson 1966, and von Hoffman 2000, Gotham 2001). Nonetheless, national publications (e.g., Time Magazine) trumpeted the program’s accomplishments well into the 1960s.<sup>3</sup> Moreover, knowledgeable proponents of the program responded strongly to the critics and clarified the program’s goals, accomplishments, and lessons-learned (Groberg 1965, Abrams 1966, Slayton 1966).

No new projects were funded under Title I after 1974.<sup>4</sup> By that time, local authorities had

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<sup>1</sup> The Housing Act of 1937 initiated federal funding for public housing and also encouraged slum clearance. It did not come close to matching the scale of post-war urban renewal efforts under Title I of the Housing Act of 1949.

<sup>2</sup> The program was originally characterized as “slum clearance” and “urban redevelopment,” but for brevity and consistency with later terminology, we refer to it as “urban renewal.”

<sup>3</sup> Time Magazine’s cover for the November 6, 1964 issue featured Edmund Bacon of the Philadelphia Planning Commission and highlighted renewal projects in several other cities.

<sup>4</sup> The 1974 Housing and Community Development Act stated that “except with respect to projects and programs for which funds have been previously committed, no new grants or loans shall be made after January 1, 1975, under title I of the Housing Act of 1949. After 1974, the federal government channeled funds to cities under the Community Development Block Grant (CDBG) program. The CDBG program gave cities wide discretion in using the funds, which are allocated by a formula based on housing stock

been awarded federal support for more than 2,100 distinct urban renewal projects with grants totaling approximately \$51 billion (in 2007 dollars), as well as smaller sums for related urban renewal programs (U.S. Department of Housing and Urban Development [HUD] 1974a, p. 15).<sup>5</sup> This sum of federal grants for projects understates the magnitude of the investments associated with the program's operation: first, because the public funds typically just cleared the way for re-development, which entailed an unknown amount of subsequent investment; second, because the federal grants covered only a portion of the costs for planning, assembling, and clearing land for projects; and third, because the range of urban renewal "programs" was broader than the funding for specific "projects."

As of June 30, 1966, the last date on which detailed data are available, approved projects had cleared (or intended to clear) over 400,000 housing units, forcing the relocation of over 300,000 families, just over half of whom were nonwhite.<sup>6</sup> The proposed clearance included nearly 57,000 total acres, of which about 35 percent was proposed for residential redevelopment, 27 percent for streets and public rights-of-way, 15 percent for industrial use, 13 percent for commercial use, and 11 percent for public or "semi-public" use (HUD 1966, p. 9).

This paper exploits the substantial degree of cross-place variation in funding to estimate urban renewal effects on city-level economic outcomes. Despite the heated controversy and potential policy implications, there is not an extensive econometric literature that examines the program's

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and population characteristics. See Brooks and Phillips (2007) and Galster et al. (2004) for studies of the CDBG program.

<sup>5</sup> The official cumulative federal spending on "projects" was approximately \$10 billion whereas the cumulative federal spending on all programs was about \$13.2 billion (HUD 1974b, table 1). These figures are unadjusted for inflation. We calculated the figure in the text by taking the annual grant approvals for projects from HUD's *1974 Statistical Yearbook* (p. 15) and adjusting them to 2007 dollars using the Bureau of Economic Analysis GDP deflator. The set of "urban renewal programs" includes a broader set of activities than "projects," such as "code enforcement projects," "demolition projects," "community renewal programs," and "neighborhood development programs." Our main cross-city analysis includes all federal grants for urban renewal programs.

<sup>6</sup> These figures are specific to "urban renewal projects" which are distinct from a number of smaller, related program grants (as discussed in previous footnote). Approximately 54 percent of the displaced families were nonwhite (HUD 1966). There are 640 acres in a square mile, so 57,000 acres is about 90 square miles. For perspective, the 1950 Census of Housing characterized approximately 1.3 million units in metropolitan areas as "dilapidated." The Census definition states: "A dwelling unit was reported as dilapidated when it had serious deficiencies, was rundown or neglected, or was of inadequate original construction, so that it did not provide adequate shelter or protection against the elements or endangered the safety of the occupants...was below the generally accepted minimum standard for housing and should be torn down or extensively repaired or rebuilt" (US Department of Commerce 1954a, p. XIV and p. 1-16). Others suggested that a much larger number of units should be cleared (Groberg 1968, pp. 67-68).

effects on cities. Richard Bingham's study (1975) is closest in spirit to our work in that it uses city-level data to study the distribution of urban renewal funds and the correlations between housing market outcomes in the 1960s and urban renewal grant levels.

Our paper makes four main advances. First, we implement a more credible identification strategy using an instrumental variable that legally constrained cities' ability to participate in the urban renewal program. Second, we compile and examine data for all cities with more than 25,000 residents in 1950 and 1980, thereby spanning the entire period during which the program operated. Since urban renewal projects often took several years to plan and execute, spanning the full period is important. Third, to the extent that urban renewal appears to have had effects on city-level outcomes, we test whether such effects worked through the displacement of minorities or residents with low human capital. Fourth, we directly assess whether the urban renewal program affected the degree of residential segregation in central cities and African Americans' labor market and housing outcomes.

Although the problems and disappointments associated with the slum clearance approach are salient, our results suggest a far less dismal legacy for the U.S. urban renewal program than is commonly cited. It appears that cities that were allowed to engage more actively in urban renewal posted better economic outcomes in 1980 than they otherwise would have in terms of property values, family income, and population growth. We find no evidence that urban renewal exacerbated residential segregation and no evidence of negative effects on African American population size, labor market outcomes, or housing outcomes. Of course, this does not imply that Title I was the best way to go about helping central cities by any criterion (economic or otherwise), nor does it imply that the short-term dislocation costs for displaced residents and businesses were unimportant, but it does suggest that the U.S. program had some lasting, positive, and greatly underappreciated effects at the city level.

## **2. Background**

In the aftermath of the Great Depression and World War II, housing issues rose to the top of the domestic policy agenda, and the elimination of slums became a primary policy objective (Gelfand 1975, Teaford 1990, Doan 1997, Fogelson 2001).<sup>7</sup> In 1940, the Urban Land Institute, which was

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<sup>7</sup> A tone of alarm is reflected in Senator Hubert Humphrey's (D MN) claim that, "Every major city in America today has a blighted or slum area which for all practical purposes is a cancer upon the economic system, an economic cancer which is literally consuming the ability of the municipalities to provide decent municipal services" (Congressional Quarterly 1949, p. 279). In retrospect, Doan concludes,

closely connected to the National Association of Real Estate Boards (NAREB), began publishing city-specific studies that recommended areas for private redevelopment (Weiss 1980). As early as 1941, the Federal Housing Administration (FHA) and economists Guy Greer and Alvin Hansen put forward plans for federally-aided slum clearance and urban redevelopment that had many similarities to subsequent legislative initiatives (Foard and Fefferman 1960). Deep disagreement over the proper role of the federal government in promoting public housing delayed major housing legislation (public housing initiatives were typically proposed in the same bills as urban redevelopment), but in 1949, Congress finally passed and President Truman signed the National Housing Act.<sup>8</sup>

Under Title I of the Act, Congress authorized the Housing and Home Finance Agency (HHFA) to assist locally planned urban renewal projects with grants of two-thirds (or in some cases four-fifths) of the net project costs, where the net cost was the difference between the total cost of acquiring and clearing properties and the income received from leasing or re-selling the cleared land.<sup>9</sup> In practice, these areas were often proximate to the city's central business district (Weiss 1980). William Slayton, the Commissioner of the Urban Renewal Administration (within HHFA), succinctly described the rationale for federal intervention in local development: "In providing for a Federal sharing in the costs, the Congress recognized two hard facts. First, our cities were financially strapped...by the squeeze between rising municipal expenditures and limited taxable resources. Secondly...the Congress acknowledged that urban blight was a national problem...The human, social, and economic costs of slums spread far beyond municipal boundaries" (1966, p. 192).

The original 1949 Act emphasized slum clearance and redevelopment of a "predominantly residential" character, but subsequent legislation widened the program's scope to include more rehabilitation and conservation efforts, made exceptions for projects that were not predominantly residential, and added emphasis on city-wide planning and code enforcement. The grant application and project execution processes changed over time, but a typical chronology would start with the creation of a Local Public Agency (LPA) that was "enabled" under state legislation to undertake urban renewal activities and to exercise eminent domain powers. The LPA would identify an "urban

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"Never before or since has housing rated so high as a public issue in the popular press, in more sophisticated forums, and in political bodies" (1997, p. 55).

<sup>8</sup> In the early years, Democrats tended to favor an aggressive approach to slum clearance and urban renewal, whereas Republicans did not and emphasized the importance of spurring private enterprise. After literally fighting over time allotments, Representatives Sabath (D) and Cox (R) sparred over the bill's merits: Sabath blasted resistance from the housing industry, southern Democrats, and Republicans; Cox characterized the bill as a "socialist scheme" (Congressional Quarterly 1949, p. 282).

<sup>9</sup> HHFA was the forerunner of the Department of Housing and Urban Development (HUD).

renewal area” (characterized by “blight” or signs of deterioration), hold public hearings, and seek approval from HHFA (or later HUD) to proceed with specific project planning in that area. The project plan would include detailed information on current and proposed land use, changes in streets and utilities, plans for assisting displaced residents and businesses, and estimates of the costs entailed. Once approved, a combination of federal loans and grants would allow the project to proceed.<sup>10</sup> Not surprisingly, many projects took several years to complete, and the slow pace of progress was a continual source of frustration.

*Once a local urban renewal program was undertaken, how might it have affected city-level outcomes?* The most direct impact should have been on the areas targeted for clearance, redevelopment, or renovation. For example, by knocking down relatively low-quality housing and commercial buildings, the left-hand tail of the city’s distribution of building quality might be thinned out, and the means and medians of various city-wide measures might rise mechanically and perhaps even perversely. The model that proponents of urban renewal had in mind, however, emphasized substantial positive spillovers within the city. Blight was considered geographically contagious, highly detrimental to the well-being of people living in or near such areas, and both a cause and consequence of middle-class flight and local governments’ fiscal problems. It was hoped and argued that reversing the fortunes of specific areas would benefit the entire city through a virtuous circle (e.g., less blight, less outmigration, and higher property values across the city), or at least by short-circuiting the process of deterioration. In this context, recourse to state-delegated eminent domain authority was important, since assembling even block-sized areas of urban land through negotiations with multiple property owners was cumbersome and subject to holdouts. In addition to localized project-level effects, the urban renewal program put new emphasis on city-wide code enforcement and comprehensive urban planning.<sup>11</sup>

In sum, urban renewal aimed to make central cities more amenable to both residents and businesses. In a model with mobile workers and capital (Roback 1982), an increase in local amenities that are valued by both workers and firms tends to raise equilibrium property values (for any given wage level, both workers and firms are willing to pay more rent) and to have an ambiguous

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<sup>10</sup> This paragraph relies primarily on Slayton (1966) and Groberg (1968). Also see Gorland (1971), Foard and Fefferman (1960) and Sogg and Wertheimer (1959). For now, we proceed as if the supply of grants was essentially elastic for projects that met HHFA or HUD requirements. In fact, program funding was subject to Congressional authorization and therefore might have been subject to year-to-year changes in funding constraints (see Groberg 1968, pp. 47-48, for some discussion).

<sup>11</sup> Carey (2001) describes the urban renewal code enforcement effort in Nashville, Tennessee.

effect on wages (for any given rent level, workers are willing to accept lower wages but firms are willing to pay higher wages). Schall (1976), however, points out that efforts to raise neighborhood quality may be unsustainable if the only stable competitive equilibrium is at a relatively low level of quality. There is no certainty in theory or practice that urban renewal's effects were positive, let alone large enough to be detectable; hence this paper's effort to measure the program's effects. Because the goals and hypothesized effects of urban renewal were city-wide in scope, so is the focus of this paper's empirical investigation. In future work, we may extend the research to identify and track the fortunes of specific slum neighborhoods, based on 1950 census-tract characteristics, to provide a different perspective on the program's localized effects.<sup>12</sup>

### **3. Empirical Strategy and the Distribution of Urban Renewal Funds**

#### ***Data and Framework***

As noted above, the goals of Title I were broad and predicated on the belief that targeted improvements in certain parts of a city could have positive effects for the city as a whole. Therefore, we examine the link between urban renewal activity and city-level economic outcomes reported in the 1980 Census of Population and Housing (after the end of urban renewal funding). We collected information on urban renewal activity from the Department of Housing and Urban Development's *Urban Renewal Directory*, which was last published in 1974.<sup>13</sup> For each city and each project, the *Directory* lists the value of federal grants approved and disbursed up to the publication date. This sum includes both "urban renewal *projects*" and funds for smaller initiatives that were added under the "urban renewal *programs*" umbrella. The close connection between federal funding and urban renewal expenditures ensures that variation across cities in the volume of federal grants is a reliable indicator of variation in urban renewal activity. We scale the "grants approved" figure by the population of each city in 1950, and all regressions control for city-specific characteristics that might

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<sup>12</sup> Although detailed plans were submitted to HHFA and HUD, to our knowledge the agencies did not compile an atlas of projects, maintain a database linking projects to specific census tracts, or (it seems) retain the plans. Our search at the National Archives and inquiries to HUD did not turn up a systematic collection of plans, but on an ad hoc basis we have located plans for a handful of cities. See White (1980) for a statistical study of census tracts in four large midwestern cities that undertook urban renewal projects.

<sup>13</sup> We have also collected data from HUD's Urban Renewal Project Characteristics, last published in June 1966. This volume contains information on project-specific features, such as cleared housing units and proposed re-use of project acreage. A search of the HUD records at the National Archives did not turn up unpublished continuations of these data, but Groberg (1968) suggests that such data may have existed at one time as "Forms H-6163."

confound the interpretation of differences in grant levels across cities (e.g., differences in property values). The instrumental-variable strategy, discussed below, addresses concerns regarding the endogeneity of funding and measurement error in the true intensity of urban renewal activity.

The central empirical question in this paper is whether more intensive urban renewal programs ( $UR_{ij}$ , where  $i$  represents the city and  $j$  the census division) led to noticeably better economic outcomes in 1980 ( $Y_{ij80}$ ), conditional on each city's economic and population characteristics at the time of the federal program's implementation ( $\mathbf{X}_{ij50}$ ) and eight census-division indicator variables ( $\mathbf{D}_j$ ). That is, do estimates of  $\beta_1$  in equation 1 suggest a favorable effect of urban renewal efforts?

$$(1) \quad Y_{ij80} = \alpha + \beta_1 UR_{ij} + \beta_2 \mathbf{X}_{ij50} + \mathbf{D}_j + u_{ij80}$$

The main outcome variables of interest are the log of median family income, the log of median value of owner occupied property, the employment rate, and the poverty rate. Subsequent analyses examine additional outcomes. The set of pre-program control variables includes: *housing stock characteristics* (the proportion of housing units built before 1920, the proportion that were dilapidated, the proportion that lacked indoor plumbing, the proportion that were crowded, the proportion that were owner-occupied, and the log median value of owner-occupied units); *population characteristics* (the nonwhite proportion of the population, median educational attainment of those over age 24, and the log of the city's total population); and *economic characteristics* (log median family income, the employment rate, the proportion of employment in manufacturing, and the proportion of families with income below \$2,000 [a proxy for poverty]).<sup>14</sup> Summary statistics are reported in appendix table 1.

The main econometric problem in interpreting  $\beta_1$  as a causal estimate is that urban renewal projects were initiated, planned, and carried out at the local level. The endogeneity of urban renewal activity makes it difficult to establish unbiased measures of  $\beta_1$ , even with a rich set of city-level control variables, because unobservable city-level differences in economic shocks and outlooks may be correlated with both the intensity of program participation and subsequent economic outcomes.

For example, cities that were deteriorating relative to others in ways that are not captured by

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<sup>14</sup> Most of the control variables are reported in the 1950 Census of Population and Housing, and Michael Haines (2004) has compiled much of this data in electronic form. We collected the data on housing conditions and plumbing in 1950 directly from the census volumes. More detailed information on the data sources is provided in the data appendix.

the control variables might have pursued a relatively large volume of urban renewal projects; such cities might have ended up with worse economic outcomes than other cities in 1980 *but* with better outcomes than if they had gone without the funding (i.e., the OLS coefficient on funding would understate the true impact of UR funding). Or the opposite case could hold: cities with many profitable investment opportunities might have enthusiastically pursued urban renewal projects. Such places might have posted relatively strong outcomes in 1980 even if the renewal program had no effect whatsoever (i.e., the OLS coefficient on UR funding would overstate the impact of the program).

We address this problem by identifying plausibly exogenous variation in cities' urban renewal funding that is due to differences in the timing of state-level "enabling legislation." This legislation permitted and set legal parameters for the creation of local agencies (LPAs) that could exercise eminent domain to acquire property for private redevelopment, a prerequisite to undertaking urban renewal projects. Enabling legislation was crucial to the implementation of federally funded urban renewal projects and is often cited in the early social science literature that considers cross-city differences in funding (e.g., Straits 1965, Plott 1968, Aiken and Alford 1970, and Bingham 1975), in historical accounts of urban renewal initiatives (e.g., Teaford 1990, Fairbanks 2002, 2006), in considerations of the program's legal aspects (e.g., Sogg and Wertheimer 1959), and in urban planning publications (e.g., see Greer and Hansen 1941 and issues of the *Journal of Housing*). Archival material indicates that HHFA (HUD's predecessor) closely monitored the development of enabling legislation because it influenced cities' ability to seek funding; HUD offered technical assistance to groups attempting to write such legislation.<sup>15</sup>

Given that Title I funding ended in 1974 and that opposition to the program tended to increase over time, a delay in state enabling legislation would effectively narrow a city's window of opportunity for funding relative to similar cities in other states. For example, Fairbanks (2006) notes that "When Congress passed the Housing Act of 1949, Dallas and Phoenix civic leaders applauded the new law as an important aid in their fight against bad housing and downtown blight." However, he goes on to note that, "The delay in state-enabling legislation deeply inhibited Dallas's ability to

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<sup>15</sup> For example, a memo from C.L. Farris (Chief of Field Operations) to H.S. Keith (Director of Slum Clearance and Urban Redevelopment) dated December 5, 1950 discusses cities that are interested in Title I funds pending the passage of appropriate state enabling legislation. A memo from A. Foard (Assistant General Counsel) to Charles Horan (Area 4 Supervisor) dated May 10, 1951 describes the status of enabling legislation in the West (National Archives, College Park, Maryland, Record Group 207, Urban Renewal Administration, General Subject Files).

participate in slum clearance and redevelopment during the 1950s and 1960s” and that “Despite the initial burst of enthusiasm, Phoenix, like Dallas, had to wait until state legislators passed the necessary enabling legislation.”<sup>16</sup> In Georgia, South Carolina, and Florida, rulings by state supreme courts delayed the implementation of enabling legislation by years.

If legislative and judicial delays of enabling legislation (1) affected city-level urban renewal funding levels, (2) did not influence city-level outcomes in 1980 through other channels, and (3) are not correlated with unobserved factors that did influence outcomes in 1980, then the timing of enabling laws may serve as a credible instrumental variable for urban renewal funding.<sup>17</sup> In the remainder of this section we focus on the first condition – whether enabling legislation affected funding levels. The specific nature of enabling legislation makes it highly unlikely to have influenced 1980 outcomes through channels other than program participation (condition 2). Potential confounding relationships (condition 3), such as concomitant social programs and secular economic trends, are explored in the paper’s next section.

### ***Funding Regression Results***

Table 1 reports ordinary-least-squares regression estimates of urban renewal funding per capita,  $UR_{ij}$ , on a variable for each city’s “years of potential participation” in the federal urban renewal program,  $L_{ij}$  (defined as the difference between 1974 and the year in which enabling legislation was passed) and other control variables:

$$(2) \quad UR_{ij} = \gamma + \tau_1 L_{ij} + \tau_2 \mathbf{X}_{ij50} + \mathbf{D}_j + e_{ij80}.$$

As in equation 1,  $\mathbf{X}$  is a set of city-level economic and population characteristics in 1950 and  $\mathbf{D}$  is a set of census-division dummy variables. For consistency with the IV regressions that follow, we use the sample of 458 cities with populations of at least 25,000 in 1950 and 1980 without missing data on

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<sup>16</sup> Fairbanks (2006) goes on to note that although representatives from Dallas, Fort Worth, and San Antonio pushed for the state-enabling legislation, representatives from rural areas and various industry groups (e.g., Texas Real Estate Board and Texas Association of Home Builders) worked to defeat it.

<sup>17</sup> In our main analysis, we use the timing of legislation as reported in Aiken and Alford (1972). This maintains consistency with the earlier literature and assures readers that judgment calls in coding have not been influenced by our intention to use the laws’ timing in subsequent IV regressions. We discuss the results with alternative coding based on our independent reading of the historical literature later in the paper. The results are similar.

outcome or control variables.<sup>18</sup> If enabling legislation constrained cities' ability to plan, apply for, and receive federal grants, then  $\tau_1$  should be positive.

Table 1's first specification (column 1) controls only for the census-division fixed effects.<sup>19</sup> We always include the census-division effects to ensure that identification is coming from comparisons within groups of states that are proximate to one another and share broadly similar economic and social characteristics. Heteroskedasticity-robust standard errors are adjusted for correlation within states; in practice this adjustment is small in magnitude. The results indicate that an additional year of eligibility for participation is associated with about 10.55 additional dollars of grants per capita; the standard error is 2.88. Thus, within census division, the timing of enabling legislation is strongly correlated with urban renewal funding per capita.

This correlation between urban renewal funds and enabling legislation is evidently *not* driven by differences in pre-existing, observable city characteristics that could influence demand for urban renewal projects. Column 2's specification adds the city-level control variables from the 1950 census ( $\mathbf{X}_{ij}$ ). The estimate of  $\tau_1$  changes only slightly from column 1 to column 2 (10.55 to 11.15), and it remains strongly statistically significant. This suggests that the instrument affected urban renewal funding in a manner that is independent of city-level demand factors associated with pre-existing variation in housing, demographic, and economic conditions.<sup>20</sup> This specification corresponds to the first-stage of the IV estimates presented in the next section.

In column 3 of table 1, we check whether the results are affected by cross-place variation in political orientation, which could also influence the demand for urban renewal funds. We assigned county-level voting results from the 1964 presidential election to each city in the sample.<sup>21</sup> Barry Goldwater, the Republican candidate, was a staunch opponent of federal urban renewal programs, and 1964 was the first year in which the Republican Party's platform specifically criticized urban

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<sup>18</sup> Results are similar if the regressions are run with all 473 cities that have the requisite data for 1950 economic characteristics and urban renewal funding.

<sup>19</sup> Tobit regressions also suggest strong and statistically significant correlations between enabling legislation and urban renewal funding per capita. We discuss the OLS results for consistency with the first-stage regressions of the IV estimates that follow.

<sup>20</sup> Although Title I was motivated by concerns about urban blight and low-quality housing, measures of housing stock quality explain remarkably little of the cross-city variation in urban renewal funding. None of the housing stock variables' coefficients approach statistical significance in column 2, except for the proportion owner-occupied (t-statistic of 1.4), which is negative and small. Even if we exclude all the housing quality measures except for the proportion dilapidated, allowing that coefficient to pick up the influence of highly correlated housing variables, there is no significant conditional correlation between dilapidated housing and urban renewal funding.

<sup>21</sup> The county-level voting data are from David Leip's online *Atlas of Presidential Elections*;

renewal, so we think this is relevant gauge of local conservatism.<sup>22</sup> The Goldwater variable has little additional explanatory power in the funding regression, and its inclusion has a small effect on the estimated magnitude and statistical significance of  $\tau_1$ , which rises from 11.15 in column 2 to 11.80 in column 3.

For additional robustness checks, we ran a regression that controls for city tax revenue per capita in 1950, and we ran separate regressions that omit all cities with more than 500,000 residents or the largest city in every state. The results are again similar to those in column 2.<sup>23</sup> In a reduced sample of 237 cities, we were able to run a regression that controls for the change in central-city miles of federally funded highways between 1950 and 1980. The regression estimate of  $\tau_1$  is nearly the same as that from a regression run with the same sample but without the highway control variable (12.6 compared to 12.8); the estimate of  $\tau_1$  remains strongly statistically significant.<sup>24</sup>

For a final sensitivity check, we have re-run column 2's specification repeatedly, dropping each census division from the sample in turn to see if any particular subregion is critical to the results. The  $\tau_1$  coefficient estimates range from a low of 9.10 (when the South Atlantic division is dropped) to a high of 12.59 (when the Mountain division is dropped). The t-statistic is never lower than 2.53.

In sum, federal requirements and historical anecdotes indicate that the timing of state enabling legislation constrained cities' ability to participate in the urban renewal program. This interpretation is supported statistically by the strong link between the quantity of urban renewal funding and the timing of legislation. The correlation is not driven by observable economic, population, or housing stock characteristics; nor does it reflect local differences in political conservatism, the local willingness to tax and spend, the extent of highway construction, the political

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<sup>22</sup> In describing the history of urban renewal in the Southwest, Fairbanks points out that "Goldwater's emergence as a national figure stemmed from his attack on creeping socialism and his criticism of how big government threatened individual rights" (2006, p. 317). The Republican Party platform in 1964 explicitly criticized urban renewal programs for the first time: "This Administration has refused to take practical free enterprise measures to help the poor...Under housing and urban renewal programs, notably in the Nation's Capital, it has created new slums by forcing the poor from their homes to make room for luxury apartments, while neglecting the vital need for adequate relocation assistance" (<http://www.presidency.ucsb.edu/platforms.php>). The Democratic platform pledged continued support for urban renewal programs. Goldwater won 38.5 percent of the popular vote in 1964.

<sup>23</sup> A regression including all the controls mentioned in the text and city tax revenue per capita in 1950 yields a coefficient on "years of exposure" of 10.61 (s.e. = 3.25). The regression that omits 17 cities with over 500,000 residents yields a coefficient of 11.21 (s.e. = 3.54).

<sup>24</sup> We are grateful to Nate Baum-Snow for supplying the highway data from his paper on suburbanization (2007).

influence of the sample's largest cities, or the influence of any particular census division. Moreover, the potential influence of unobservable trends and shocks that *might* be correlated with enabling legislation and renewal funding should be mitigated by the census-division fixed effects. We conclude that differences in the timing of state enabling legislation effectively and exogenously (from the cities' standpoint) altered the window of opportunity to plan projects and secure urban renewal funds.

#### 4. Urban Renewal Effects

##### *Basic Results from Instrumental Variable Estimation*

We estimate the effect of urban renewal programs in equation 1 by instrumenting for funding (UR) with the timing of enabling legislation (L). The main outcome variables of interest are median family income, median property value of owner-occupied housing, the employment rate, and the poverty rate. For consistency across all specifications, we employ the extensive set of city-level control variables ( $\mathbf{X}_{ij50}$ ) described above as well as the census-division dummy variables. The implicit first-stage regression results are the same as those in table 1, column 2. The F-statistic on the potential-years-of-participation variable in the first-stage regression is 13.1, so we are not very concerned with weak instrument bias (Bound, Jaeger, and Baker 1995; Staiger and Stock 1997).<sup>25</sup>

The base-specification estimates of  $\beta_1$  are reported in row 1 of table 2, where each table entry is from a separate instrumental variable regression. The results suggest that urban renewal programs led to higher median income and higher median property values in 1980 at a 5 percent level of statistical significance. The estimated effects on the employment rate and proportion of families in poverty are not as precisely estimated, but they are also consistent with favorable effects from urban renewal.

For a federal program that is widely held in low regard, the basic results in table 2 are striking: a \$100 difference in grant funding per capita is associated with a 2.6 percent difference in 1980 median income and a 7.7 percent difference in 1980 median owner-occupied housing value.<sup>26</sup>

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<sup>25</sup> The F-statistic on the excluded instrument is above the "rule of thumb",  $F > 10$ , suggested by Staiger and Stock (1997). Moreover, we are using only one instrument for one endogenous variable, and so the equation is exactly identified. This should mitigate potential weak-instrument bias (Angrist and Krueger 2001, p. 79).

<sup>26</sup> Because total investment in the wake of federal urban renewal funding is an unknown multiple of the federal grant and because these resources might have been invested elsewhere in the absence of urban renewal programs (e.g., more suburban development), the coefficients from these city-level regressions

The median city in our dataset received \$122 per capita in funding, and so the coefficient estimates suggest an economically significant impact.

Relative to the OLS results, which are reported in appendix table 2, the IV results are substantially more positive. Assuming for now that the instrument is valid, this pattern suggests that urban renewal activity was correlated with unobserved negative shocks to city-level outcomes that tend to pull down the OLS estimates of urban renewal effects. We explore the channels through which urban renewal effects worked in a later section of the paper, but first we test the robustness of the basic results.

### ***Alternative Explanations and Robustness Checks***

We start by considering four distinct scenarios in which the basic estimates of urban renewal effects might be confounded by omitted variables. Essentially, these are scenarios in which the instrument is correlated with the error term in equation 1 (violating “condition 3” described above). Then, we test the sensitivity of the results to a substantial recoding of the instrumental variable.

First, it is possible that local government programs coincident with urban renewal influenced city-level outcomes. If participation in these coincident programs was uncorrelated with the timing of state-enabling legislation for urban renewal, then the IV estimates would still be valid. But since some programs were related to urban renewal (e.g., established in related legislation) or motivated by similar concerns, we have run regressions that include control variables for the number of low-rent public housing units per capita built under Housing Act of 1949; whether the city filed a first-round application for the “Model Cities” program; and city-level spending per capita on poverty programs circa 1966.<sup>27</sup> If the basic IV results were simply picking up the influence of these other programs, then the additional control variables should diminish the coefficient on urban renewal funding. The results in row 2 of table 2 show that including the “other program” variables in the regressions tends to increase magnitude of the coefficients on the urban renewal variable, and the pattern of results is consistent with those in row 1: urban renewal is associated with higher income, property values, and employment rates (all at a 10 percent statistical significance level or better), and with lower poverty rates (albeit with a relatively large standard error).

Second, even within census divisions, it is possible that differences in the timing of state

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should be interpreted with care – they do not represent social returns on investment or local fiscal multipliers in any straightforward fashion.

<sup>27</sup> The data are taken from *Governmental Units Analysis Data* (Aiken and Alford 1972).

enabling legislation reflect cross-state differences in financial support for cities. If differences in such support contributed to differences in city-level outcomes in 1980, then the estimates above would exaggerate the effects of urban renewal. We take two approaches to this issue; one is direct and the other is indirect. We collected information on state aid directed to city governments in 1952 from a Bureau of Census publication (U.S. Department of Commerce 1954b). Expressed relative to the urban population's size in each state, this provides a state-level variable that controls directly for pre-existing differences in state government policy with respect to cities. We have also included an indirect control for cross-state differences in political conservatism: the state-level Goldwater vote in the 1964 presidential election. Row 3 of table 2 reports the IV coefficients on urban renewal funding from regressions that include both of these state-level control variables. Again, the overall results are similar to those in row 1, with somewhat larger coefficients and standard errors.<sup>28</sup>

Third, secular shifts in the US economy may have favored some cities relative to others. If these differential trends are correlated with differences in the timing of enabling legislation within census division, the estimated urban renewal effects would be invalid. The city-level control variables for economic and population characteristics (including manufacturing employment) circa 1950 should narrow the scope of this problem, but we can address the hypothesis more directly by including a variable that interacts highly detailed (three-digit) city-level industrial composition in 1930 with national-level differences in growth across industries between 1930 and 1980 using the Integrated Public Use Microdata Series (IPUMS, Ruggles et al. 2008). We base the calculations on the industrial distribution of employment in cities in the 1930 IPUMS because this is the latest year in which city codes are revealed for all places with more 25,000 residents. This provides the closest possible match to the original sample of cities. Unfortunately, we lose a large portion of the sample (133 cities out of 458, or 30 percent) when creating this variable. The results are reported in row 4 of table 2. They are generally consistent with the base results in row 1, though the estimated effect on income appears somewhat weaker and the estimated effect on property values appears somewhat stronger. In all cases, the change in coefficients relative to row 1 appears to be due to the restricted sample rather than the added control variable *per se*. Given this finding and that the basic results already include a measure of exposure to manufacturing's relative decline, we do not think that

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<sup>28</sup> Adding all five extra control variables from rows 2 and 3 in the same regression specification yields results that are similar to those in rows 1 to 3.

secular shifts in labor demand are confounding the basic results.<sup>29</sup>

Fourth, we dropped the largest city in each state from the sample and re-ran the basic IV regressions. This leaves us with a sample of cities within each state that are less politically influential and more likely to find the timing of enabling legislation exogenous to their circumstances and demands. The results are reported in row 5. They are very similar to the base results in row 1, and in most cases are marginally stronger in magnitude and statistical significance.

None of the robustness checks above suggests that the basic results are driven by omitted factors that are strongly correlated with the instrument and that influence the outcomes of interest directly (condition 3). Although it is not possible to completely rule out contamination from unobservable shocks that are correlated with the instrument, such shocks would have to operate differentially across cities within census divisions in a manner that is uncaptured by the lengthy set of control variables deployed above but that is strongly correlated with enabling legislation.<sup>30</sup>

Next, we undertake a different kind of robustness test – we replace the basic instrumental variable with alternative codings of the same variable. Although we have confidence in the original coding reported in Aiken and Alford (1972), we discovered that the underlying sources are not well documented and that the coding used by Bingham (1975) is neither reported in his book nor retrievable (personal communication with Bingham, July 2008).<sup>31</sup> Therefore, we independently reconstructed the timeline of state enabling laws from a variety of sources, including many issues of the *Journal of Housing*, *Book of the States*, *Municipal Year Book*, archived reports from the Housing and Home Finance Agency (the predecessor of the Department of Housing and Urban Development), and academic articles. Reassuringly, our coding turned out to be similar to that in Aiken and Alford (1972), albeit not exactly the same. Another concern is that a handful of states passed legislation for a specific city early in the program and later passed legislation permitting broader participation. Our concern is that this introduces some within-state variation in the instrument that could be a function of city-specific demand.

To test the sensitivity of the results to the instrument's coding, we have re-run the base-

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<sup>29</sup> That is, the coefficients estimated with the restricted sample are not sensitive to whether we control for the industrial shift variable.

<sup>30</sup> To explore the results' sensitivity to post-1950 state-level economic shocks, we have run regressions that add a control variable for the log change in state income per capita from 1949 to 1979. This is an endogenous control variable, but the sensitivity of the urban renewal coefficients are still of interest. As expected, its inclusion leads to smaller point estimates on urban renewal funding, but it does not undermine the basic results in table 2.

<sup>31</sup> A future version of this paper will include an appendix with our detailed notes on legislative coding.

specification regressions using alternative coding schemes based on our reading of the legislative history. Row 6 of table 2 reports results when all cities in a state are assigned the earliest date of state enabling legislation, and row 7 reports results when all are assigned the latest date. Due to differences in our base coding relative to Aiken and Alford and to the shifting of assignments in some states to either the earliest or latest date of state legislation, about 20 percent of cities have a different “years of exposure” value in rows 6 and 7 than in previous rows. Nonetheless, the pattern of regression results in rows 6 and 7 is similar to the basic regression results in row 2.

### ***Channels of Influence***

If the urban renewal program affected city-level economic outcomes, as suggested in table 2, how were these effects achieved? As mentioned earlier, one can imagine urban renewal’s effect on city-level variables working through a narrow, mechanical, and perhaps even perverse channel – essentially lopping off the left-hand tail of the housing-quality distribution and driving people with low levels of human capital out of the city. We will refer to this as the “displacement channel,” which works by altering the composition of the city’s population. Of course, a mechanism that merely displaces the poor from the city is quite different from the mechanism publicly touted by proponents of urban renewal. The program’s proponents argued that it could impart a virtuous circle of renewal and growth, or that it could at least dampen an ongoing circle of deterioration and depletion. For short, we will refer to this as the “renewal and growth channel.” These two channels of influence are not mutually exclusive, and discerning between them empirically may be difficult. For example, displacement of the poor could occur as an indirect byproduct of rising property values, which in turn are anchored by gains in productivity or amenities. Nonetheless, the distinction is useful and important when interpreting the urban renewal effects.

We attempt to shed light on these issues in two ways. First, in IV regressions that are similar to those discussed above, we directly examine whether urban renewal funding affected several city-level proxies for the “displacement” or “renewal and growth” channels (table 3). Second, to see if the basic results in table 2 are driven (partially or wholly) by changes in population characteristics, as the displacement hypothesis would suggest, we add control variables for endogenous population characteristics circa 1980 to the base regressions from table 2. If the displacement channel was the primary means by which urban renewal affected outcomes, we should see a sharp diminution of the point estimates on urban renewal funding (table 4).

Panel A of table 3 offers a direct assessment of the displacement channel. We estimate the

effect of urban renewal on the median schooling level of the adult population and the black proportion of the population. If urban renewal made cities less hospitable for low human capital or minority residents, then we would expect the urban renewal coefficient in the schooling regression to be strongly positive and the coefficient in the black-share-of-population regression to be strongly negative. We find no statistical support for these hypotheses. The estimated effects on schooling are small and imprecise, and urban renewal did not lead to a noticeable reduction in the black population (the point estimate is positive), even though black residents were disproportionately displaced from renewal areas *within* cities.<sup>32</sup>

Panels B and C of table 3 assesses aspects of the “renewal and growth” channel, starting with the physical characteristics of the housing stock in 1980, measured by the proportion of units built before 1940 (“old units”) and the proportion of units without full plumbing.<sup>33</sup> Urban renewal funding apparently led to a lower proportion of old housing units in 1980. The coefficient is negative and statistically significant, suggesting that an additional \$100 per capita in funding lowered the proportion of old housing by 3 percentage points. The estimate of the effect on the proportion of units without full plumbing is also negative, but it is imprecisely estimated, probably because by 1980 there was relatively little variation in this dimension of housing quality.<sup>34</sup>

Panel C of table 3 reports estimates of the urban renewal effect on the size of the population and housing stock in 1980, controlling for their size in 1950 and changes in land area. The estimates suggest that the urban renewal positively affected city population and housing units, albeit at marginal levels of statistical significance. The point estimates suggest that population and housing units each increased by about 9 percent in response to \$100 per capita difference in urban renewal funding.<sup>35</sup>

In combination, the results in table 3 – the absence of a discernable effect on the population’s composition in terms of race or education level, the relative increase in city population size and housing stock, and the relative decline in the share of old housing units – are not consistent with a

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<sup>32</sup> Because urban renewal is frequently cited as a program that had detrimental race-specific effects, we undertake a further examination of African Americans’ outcomes and migration patterns in a later section.

<sup>33</sup> The census did not continue classifying housing units as “dilapidated” up to 1980, but in 1950 the correlation between the proportion of units dilapidated and the proportion of units without full plumbing in was 0.77.

<sup>34</sup> In results that are omitted for brevity, we find no effect on the proportion of housing units that were owner-occupied, which in practice is a proxy for the proportion of single-family detached units.

<sup>35</sup> Regressions in which the outcome variable may be particularly sensitive to changes in area, such as counts of population or housing units, include a control variable for the change in log geographic area.

simple story in which urban renewal perversely raised city-wide outcome variables through displacement of those with relatively low levels of human capital. They are, however, consistent with the operation of the alternative “renewal and growth” mechanism – the housing stock is newer and the population is larger.

In table 4, we re-run the base regressions from table 2 and add control variables that proxy for displacement: the racial and educational composition of the city in 1980. The additional control variables may be endogenous to urban renewal, and so the resulting coefficient on urban renewal funding is no longer an estimate of the program’s overall effect. Rather, the point is to see whether changes in city population characteristics underpin the basic effects estimated in table 2’s regressions. The first row of table 4 simply replicates the original results from table 2 for easier comparison; the table’s second row of table includes the proportion black in 1980 and median schooling in 1980 as control variables (as well as the 1950 analogues of these variables). The coefficients on urban renewal are *larger* in the augmented regressions, and so it seems highly unlikely that the positive effects of urban renewal identified in table 2 are driven by changes in the city’s basic population characteristics.

The econometric results in this section of the paper strongly suggest that cities that were constrained in their urban renewal participation fared worse than others between 1950 and 1980, on average. Nonetheless, this period was hardly an optimistic one for most American cities.<sup>36</sup> To some critics the urban renewal program was a *prima facie* failure because it did not successfully reverse the decline of struggling cities, though this is probably an unrealistic standard for any urban policy attempting to counteract the strong economic forces that were drawing population and business away from central cities. The results, seen in the context of the period’s urban problems, illustrate both the usefulness and the limits of policy – the urban renewal program appears to have helped cities, but it could not reverse the tide.

## **5. Race and Urban Renewal**

### ***Urban Renewal’s Effect on Residential Segregation***

The 1959 *Report* of the U.S. Commission on Civil Rights suggested that: “The clearance of slums occupied largely by Negro residents and their replacement with housing accommodations beyond the means of most Negroes gives rise to the question whether slum clearance is being used

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<sup>36</sup> See Glaeser, Scheinkman, and Shleifer (1995) or Rappaport (2006) for studies of U.S. city growth patterns since 1950.

for ‘Negro clearance.’ Small areas occupied by Negroes may be selected for urban renewal, forcing them to move into other areas that are predominantly Negro, thereby reinforcing or perhaps establishing for the first time strict patterns of residential segregation” (p. 488). This hypothesized effect on segregation is often suggested in the literature on urban change since the 1950s, sometimes by bundling urban renewal with public housing, Federal Housing Administration redlining, and other policies in a broad assignment of blame for residential segregation.<sup>37</sup> However, to our knowledge, the hypothesis has never been tested.

In this section, we ask whether there is link between the extent of urban renewal activity and the city-level dissimilarity index in 1980. The dissimilarity index, described by Duncan and Duncan (1955), is widely used in quantitative studies of segregation (Massey and Denton 1995; Cutler, Glaeser, Vigdor 1999). It ranges between zero and one, and it can be interpreted as the proportion of the black population that would have to move to a different neighborhood in the city to achieve a balanced distribution of blacks and non-blacks across neighborhoods.<sup>38</sup> The index value would be zero for a city in which the proportion of the black population residing in each census tract equals the proportion of the non-black population residing in that tract. We calculated residential segregation levels for each city using the original tract-level information for 1980 produced by the U.S. Census (1982, Summary Tape File 3A).<sup>39</sup>

Table 5 reports results from three regressions, all estimated using the instrumental variable approach described above. The hypothesis is that higher levels of urban renewal activity between 1949 and 1974 resulted in higher levels of residential segregation at the program’s conclusion, conditional on the 1950 city characteristics described above and census-division indicators. For the full sample of 458 cities, the point estimate is negative and the standard error is relatively large; there is no statistically significant relationship between urban renewal funding and segregation in 1980.

Because relatively few cities had census tracts defined in 1950, adding a control variable for pre-program segregation necessarily reduces the sample size. In column 2, we exclude the cities that

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<sup>37</sup> See Hirsch (2000), Carr and Kutty (2008), and Squires (2008) for recent examples.

<sup>38</sup> Let  $black_{total}$  and  $nonblack_{total}$  represent a city’s population count of black and nonblack residents, respectively, where as  $black_i$  and  $nonblack_i$  are tract-level counts. By definition, the dissimilarity index

for the city equals: 
$$\frac{1}{2} \sum_{i=1}^N \left| \frac{black_i}{black_{total}} - \frac{nonblack_i}{nonblack_{total}} \right|.$$

<sup>39</sup> The STF-3A files are available from the Inter-university Consortium for Political and Social Research (ICPSR Study 8071). Unfortunately, the tract data available from the National Historical Geographic Information System and from GeoLytics, Inc. are not coded in a manner that consistently allows for this central city-specific calculation.

have no segregation index available for 1950, but we use the same specification as in column 1. The coefficient changes sign in the reduced sample, but it remains small and statistically insignificant. In column 3, we add the control variable for the level of residential segregation in 1950 from Cutler, Glaeser, and Vigdor (1999). The coefficient on urban renewal funding is similar to that in column 2.<sup>40</sup> In sum, the regression results provide no statistical support for the view that the degree of residential segregation in cities was influenced by the extent of urban renewal activity.

It is true that the overall degree of residential segregation increased during the years of the urban renewal program, but this appears to be a coincidental, not a causal, relationship. Moreover, it is important to acknowledge that the majority of the twentieth-century rise in urban residential segregation occurred between 1920 and 1950, before the urban renewal program even started. Both the timing and the cross-city econometric analysis indicate that the federal urban renewal program contributed little, if anything, to the high and persistent levels of residential segregation in American cities.

### ***Urban Renewal and African American Economic Outcomes***

It is possible that the urban renewal program had positive effects on average city-level outcomes but simultaneously had negative effects on particular population groups, perhaps especially those who tended to reside in or close to areas targeted for redevelopment. African Americans made up about 17 percent of central city residents in 1960 (U.S. Department of Commerce 1963, p. 1), but they made up slightly more than half of the families displaced by urban renewal projects that were planned by 1966 (HUD 1966, p. 9). Stories of predominantly black neighborhoods that were transformed or destroyed by urban renewal are not difficult to find (Saunders and Shackelford 1998, Carey 2001, Schuyler 2002), and the colloquial likening of urban renewal to “negro removal” is both evidence of and fuel for the view that the program had pronounced negative effects on African Americans.<sup>41</sup>

This background motivates a closer examination of outcomes specifically for African Americans. Data limitations make it difficult to study persons who were actually displaced by urban

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<sup>40</sup> The first-stage F-statistic on the excluded instrument is 4.1 in column 2’s specification.

<sup>41</sup> Writer James Baldwin famously used the phrase “negro removal” in a television interview in 1963 with Kenneth B. Clark, but the phrase certainly predates that interview. For example, it is used in a New York Times article about urban renewal on August 30, 1962 (Arnold, p. 17), and George Nesbitt used the term “Negro Clearance” in an article in 1949. Even before urban renewal, the Roosevelt Administration’s National Industrial Recovery Act was likened to a “Negro Removal Act” in the early 1930s (Moreno 2007, p. 26).

renewal projects (Hartman 1964, U.S. Housing and Home Finance Agency 1966). However, we can use the census data and the instrumental variable approach described above to assess whether urban renewal activity had a discernable impact on the housing and labor market outcomes of black central-city residents. The data appendix describes the sources from which we collected the data.

The regression specifications in table 6 are similar to those in tables 2 and 3, except that the outcome variables are now specific to African Americans. Since not all cities had black-specific outcomes reported in the census data, the sample size in table 6 is smaller than in table 2. The standard errors for some of the estimates are large, but the pattern of results is consistent with earlier findings. On average, more urban renewal funding is associated with higher black family income and property values, faster population growth, fewer old housing units, and (less precisely estimated) higher employment, less poverty, and fewer units with inadequate plumbing.

Median schooling levels tended to rise with urban renewal. We think this is unlikely to reflect a simple “displacement channel” story because it happened in the context of faster overall black population growth. Nonetheless, it is possible that the outmigration of displaced slum residents or other less-skilled workers accounts for the failure to detect any adverse effect on African American economic outcomes circa 1980. Although this hypothesis cannot be directly evaluated with city-level census data, we can use state-of-residence and state-of-birth data from the 1980 IPUMS (5 percent sample) to characterize the migration patterns of African Americans with less than 12 years of schooling (age 21 to 59).<sup>42</sup> We defined migrants in the sample as US-born persons with a different state-of-residence than state-of-birth. When the migrants are summed by birth-state, this gives the number of state out-migrants; when summed by state-of-residence, this gives the number of state in-migrants; the difference is net migration, which we scale by the total number of African Americans with less than 12 years of education who were born in a particular state (age 21 to 59 in 1980). IV regressions of this net migration measure on census division dummies and urban renewal funding per urban capita (state level), instrumented with the earliest or latest year of enabling legislation in that state, yield positive and statistically significant coefficients.<sup>43</sup> That is, blacks with

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<sup>42</sup> If those displaced by urban renewal projects crowded into nearby neighborhoods, then UR-induced outmigration from the city could include many who were not directly affected by a UR project. In any case, there is no way of identifying which residents were directly affected by UR.

<sup>43</sup> The rationale for this coding is discussed in section 4. State-level total urban renewal funding is from the *Urban Renewal Directory, June 1974* (U.S. Department of Housing and Urban Development, pp. 2 and 4). Urban population in each state is from the 1950 Census of Population, volume II, part 1, table 13. The F-statistic on the excluded instruments in these state-level regressions is large (>20). Reduced-form

relatively low education levels were less likely, not more likely, to leave states where urban renewal was undertaken intensively, and therefore it is highly unlikely that the migration patterns of less-educated African Americans can explain table 6's results.

Overall, the results of this section suggest that urban renewal programs did not have a discernable negative impact on average black labor market or housing outcomes circa 1980. We reiterate that the analysis here is not informative about the costs incurred by those who were actually displaced by urban renewal projects, but it is informative about the average economic outcomes for a population group that was disproportionately affected by the program's operation.

## **6. Conclusion**

In a 50-year anniversary retrospective on the 1949 Housing Act, Robert E. Lang and Rebecca R. Sohmer note that, "The consensus is that Title I urban renewal mostly failed, in part because large-scale slum clearance proved a crude and largely unworkable redevelopment method" (2000, p. 296). In the same retrospective volume, Jon C. Teaford highlights the usefulness of lessons learned from the urban renewal experience and cites examples of successful projects, but he also notes that "...the chief product of Title I was a widely held commitment never to have another Title I" (2000, p. 463).

Teaford is almost certainly correct in suggesting that slum clearance of the sort sponsored by Title I is unlikely to happen again in the United States – the scale and nature of displacement and the slow pace of redevelopment doomed the program politically. Yet, policymakers around the world continue to struggle to manage urban growth and modernization in the presence of older, low-quality building stock and poor residents (Mukhija 2001, Zhang and Fang 2004, Field and Kremer 2005). In this context, a better understanding of the rise, fall, and legacy of the U.S. urban renewal experience would be valuable.

This paper offers preliminary assessments of the effects of urban renewal funding in the United States, which was originally sponsored under Title I of the Housing Act of 1949. The pattern of funding across cities suggests that differences in the timing of state enabling legislation exogenously influenced the volume of urban renewal activity. The empirical link between funding and the number of years legally eligible for program participation is strong and largely unaffected by the inclusion of control variables for housing stock, demographic, economic, and political

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regressions of net migration on years of potential participation in urban renewal yield a similar conclusion.

characteristics. The variation in funding that was induced by differences in enabling legislation forms the basis of the paper's instrumental variable approach to estimating the program's economic effects.

The IV estimates suggest that urban renewal activity between 1949 and 1974 was correlated with several positive city-level economic outcomes in 1980: higher income, higher property values, faster growth of population and housing stock, fewer old housing units, and (although less precisely estimated) higher employment rates, fewer poor families and fewer housing units without full plumbing. Again, controlling for a variety of contemporary political, fiscal, and economic variables does not dispel these correlations, and in some cases the coefficients are strengthened. The simultaneous increase of housing units, population, and housing values suggest that the program did not merely knock down the left-hand tail of the housing stock, although there is a notable decline in old housing. Rather, the pattern is consistent with the program spurring more growth than otherwise would have occurred. Of course, urban renewal did not solve the economic and social problems of central cities, but it appears to have been more helpful than is commonly acknowledged.

A similar IV approach is taken to evaluate the influence of urban renewal on residential segregation levels and on African American economic outcomes in 1980. In the city-level data, we found no evidence that urban renewal had detrimental effects on segregation levels or on African American outcomes. Using micro-level data aggregated to the state-level, we found no evidence that African Americans with low levels of education emigrated at higher rates from states with relatively high levels of urban renewal activity; in fact, the opposite appears to be the case.

Our interpretation of the US experience with urban renewal is tempered by recognition of the non-pecuniary costs and inequities associated with the slum clearance approach. Senator (and economist) Paul Douglas reflected, "The clearance of slums without the requirement for full replacement...forced poor people to carry an unfair share of the burden of rebuilding America's cities."<sup>44</sup> Moreover, the exercise of the power of eminent domain, particularly for the sake of private redevelopment, remains a politically explosive issue because it overrides a deeply rooted American commitment to the rights of individual private property owners. Slum clearance had elements that alienated people from across the political spectrum, and despite efforts to reform the program, its operation sowed the seeds of its demise.

There are several potentially useful extensions of this research. First, even if one is

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<sup>44</sup> This quote is from the foreword to Groberg (1968). Douglas was writing as the Chairman of the National Commission on Urban Problems.

convinced that urban renewal had the effects suggested by this paper's results, one would want to know more about the underlying mechanisms through which the program worked. Case studies may be fruitful in this regard. Second, as mentioned earlier in the paper, it may be interesting to consider Title I from a different perspective. It is possible to use census-tract information to identify slums in 1950 (roughly based on housing and population characteristics), and then to follow the evolution of those neighborhoods over time and in light of Title I's ostensible goals. Finally, perhaps in combination with the "slum tracking" just mentioned, we could attempt to exactly locate each project undertaken with Title I funding. We know the project names and (of course) their cities, but exactly locating them within cities is rarely straightforward.<sup>45</sup> It would be difficult to make causal arguments on the basis of this information because project location is endogenous, but the historical detail would be useful in developing a fuller descriptive account of the urban renewal program.

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<sup>45</sup> See White (1980) for an example of this kind of study using four cities.

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## Data Appendix

### Housing and Population Data

The data for population, land area, housing units, percent employment, median family income, median property values, percent of owner occupied housing, and percent of employment in manufacturing for 1950 and 1980 are from the files compiled by Haines (2004). In addition, data for the percent of nonwhite residents and median schooling for 1950 and data for the percent of black residents, crowded units, occupied units without full plumbing, families in poverty, and old units for 1980 are from the Haines files. The 1950 and 1980 data are from the Haines datasets numbered 60 and 66, respectively.

We typed in the data for the percent of dilapidated housing units, units built before 1920, units without full plumbing, and crowded units for 1950 from the published volumes of the *1950 Housing Census*. Data for dilapidated units and units without full plumbing are from table 18, data for crowded units are from table 19, and data for units built before 1920 are from table 20. We collected data on the percent of families with incomes less than \$2,000 from table 11 in the published volumes of the *Characteristics of Population* in the *1950 Population Census*. We collected data on median years of schooling of adults (over age 24) in 1980 from table 119 of the *General Social and Economic Characteristics* volume of the *1980 Census of Population*.

Some of the black-specific data for 1980 were also entered manually. Data for the percent of black owner-occupied units, median schooling, percent employment, and median family income were entered from the *General Social and Economic Characteristics* volume of the *1980 Census of Population*. The percent of owner-occupied units are from table 22, median schooling data are from table 132, percent employment data are from table 134, and median family income data are from table 136. Data for the percent of black units without full plumbing, crowded units, and median property values are from table 3 of the *General Housing Characteristics* volume of the *1980 Census of Housing* and data for the percent of old units are from table 77 of the *Detailed Housing Characteristics* volumes of the *1980 Census of Housing*.

### Election and Government Spending Data

Data for state and county-level votes for Goldwater in the 1964 Presidential Election were entered from David Leip's *Atlas of U.S. Presidential Elections*. Data for state aid to cities were entered from "State Payments to Local Governments in 1952", in *State and Local Government Special Studies*, 35, published by the U.S. Department of Commerce (1954). These data were divided by state urban population from *1950 Characteristics of the Population* using the "old definition" of urban.

Urban Renewal state enabling legislation data and data on city applications to the Model Cities program are from *Governmental Units Analysis Data* (Aiken and Alford 1972). Data for units of public housing per capita built under the 1949 Housing Act and spending per capita on poverty programs circa 1966 are also from *GUAD*. We collected Urban Renewal funding data from the *Urban Renewal Directory* (HUD 1974).

### Tract-level Data

We calculated central city segregation levels in 1980 using data from Summary Tape File 3A of the *1980 Census of Population and Housing* (ICPSR 8071). The 1950 segregation levels, which are available for relatively few cities, were originally described in Cutler, Glaeser, and Vigdor (1999) and are posted by Vigdor at: <http://trinity.aas.duke.edu/~jvigdor/segregation/index.html>.

Table 1: Urban Renewal Funding and Enabling Legislation

	1	2	3
Years of potential UR participation	10.548 (2.884)	11.153 (3.077)	11.797 (3.311)
Prop. units owner-occupied 1950	-----	-2.276 (1.591)	-2.354 (1.611)
Ln median property value 1950	-----	-70.259 (106.125)	-77.103 (104.513)
Prop. units dilapidated 1950	-----	1.133 (3.217)	1.399 (3.282)
Prop. units built before 1920	-----	-0.165 (1.160)	-0.145 (1.165)
Prop. units w/o full plumbing 1950	-----	-0.437 (1.642)	-0.583 (1.651)
Prop. units crowded 1950	-----	0.059 (2.418)	0.178 (2.414)
Ln population 1950	-----	-3.446 (15.575)	-1.891 (14.710)
Prop. pop. nonwhite 1950	-----	1.354 (1.443)	0.843 (1.608)
Prop. employ. manufacturing 1950	-----	-1.126 (1.611)	-1.153 (1.632)
Percent labor force employed 1950	-----	-11.355 (7.292)	-12.207 (7.252)
Median years schooling 1950	-----	5.850 (24.697)	4.404 (24.818)
Ln median family income 1950	-----	-11.644 (210.828)	8.073 (208.292)
Prop. families w/ income <\$2k 1950	-----	-1.209 (4.801)	-1.352 (4.809)
Goldwater 64, county level	-----	-----	1.171 (1.423)
Census-division dummies	Yes	Yes	Yes
Observations	458	458	458
R-squared	0.104	0.136	0.138

Notes: The dependent variable is cumulative Title I federal grant approvals per capita at the city-level between 1949 and 1974. Heteroskedasticity-robust standard errors corrected for correlation within states are reported in parentheses. A “dilapidated unit” is one that had “serious deficiencies, was rundown or neglected, or was of inadequate original construction, so that it did not provide adequate shelter or protection against the elements or endangered the safety of the occupants...was below the generally accepted minimum standard for housing and should be torn down or extensively repaired or rebuilt” (Bureau of Census, 1954, volume II, part 1, p. XIV and p. 1-16). The proportion of units without full plumbing are those without “complete plumbing for exclusive use” (where “complete” entails hot running water, flush toilet, and bath or shower). “Crowded” units are those with more than 1 person per room. Median property value pertains to owner-occupied housing. Units of observation are cities (not metro areas). Summary statistics are in appendix table 1.

Sources: Housing and population data are from Haines (2004) with the exception of 1980 median schooling data (which we collected from the 1980 Census of Population) and 1950 dilapidated housing

and plumbing data (which we collected from the 1950 Census of Housing). State enabling legislation data are from *GUAD* (Aiken and Alford 1972) and Urban Renewal funding data are from the *Urban Renewal Directory* (HUD 1974).

Table 2: Urban Renewal Effects on Income, Property Value, Employment, and Poverty in 1980

	Ln median family income	Ln median property value	Employment rate	Poverty rate	N
1: Basic specification	0.000256 (0.000113)	0.000774 (0.000327)	0.00328 (0.00213)	-0.00619 (0.00513)	458
2: Basic spec. plus controls for public housing, poverty spending, Model Cities	0.000432 (0.000219)	0.00110 (0.000506)	0.00598 (0.00319)	-0.0128 (0.00940)	458
3: Basic spec. plus controls for state aid to cities and support for Goldwater	0.000287 (0.000145)	0.00106 (0.000398)	0.00690 (0.00374)	-0.00905 (0.00630)	458
4: Basic spec. plus control for labor-demand shift (based on pre-program industrial composition)	0.000210 (0.000170)	0.000901 (0.000351)	0.00376 (0.00270)	-0.00418 (0.00588)	325
5: Basic specification, drop largest city in each state	0.000262 (0.000102)	0.000692 (0.000302)	0.00353 (0.00197)	-0.00686 (0.00474)	410
6: Basic specification, alternative legal coding (earliest year of enabling leg.)	0.000318 (0.000130)	0.000789 (0.000445)	0.005135 (0.002657)	-0.008955 (0.006150)	458
7: Basic specification, alternative legal coding (latest year of enabling leg.)	0.000301 (0.000134)	0.000862 (0.000456)	0.004524 (0.002698)	-0.005690 (0.005844)	458

Notes: The top entry of each cell is the estimated coefficient on urban renewal funding per capita from a separate instrumental variable regression. Heteroskedasticity-robust standard errors are adjusted for correlation within states and reported in parentheses below the coefficient. The timing of state-level enabling legislation instruments for urban renewal funding per capita. The “basic specification” includes regional fixed effects and the set of city characteristics described in the text; the implicit first-stage for the basic specification is identical to column 2 of table 1. The regression of log median value omits Beverly Hills, CA because its median value is topcoded at \$200,000. See table 1’s notes for variable definitions. Sources: Housing and population data are from Haines (2004) with the exception of 1950 dilapidated housing and plumbing data, which we collected directly from the 1950 Census of Housing. State enabling legislation data for rows 1 to 5 are from *GUAD* (Aiken and Alford 1972); in rows 6 and 7 the coding is based on our reading of many sources discussed in the text. Urban renewal funding data are from the *Urban Renewal Directory* (HUD 1974).

Table 3: Urban Renewal Effects on Population and Housing Characteristics in 1980

	Population Characteristics		Housing Stock Characteristics		City Growth	
	Median schooling	Proportion black	Proportion of units that are old	Proportion of units w/o full plumbing	Ln population	Ln housing units
1: Basic specification	0.0000960 (0.000403)	0.0108 (0.00981)	-0.0310 (0.0131)	-0.00156 (0.00115)	0.000939 (0.000547)	0.000953 (0.000539)
2: Basic spec. plus controls for public housing, poverty spending, Model Cities	0.000221 (0.000562)	0.00156 (0.0133)	-0.0366 (0.0169)	-0.00197 (0.00144)	0.00140 (0.000721)	0.00139 (0.000746)
3: Basic spec. plus controls for state aid to cities and support for Goldwater	0.000207 (0.000404)	0.00606 (0.00991)	-0.0390 (0.0158)	-0.00148 (0.00109)	0.00110 (0.000556)	0.00112 (0.000553)
4: Basic spec. plus control for labor-demand shift (based on industry comp.)	0.0000288 (0.000537)	0.00968 (0.0128)	-0.0347 (0.0145)	-0.00149 (0.00109)	0.00159 (0.000610)	0.00156 (0.000580)
5: Basic specification, dropping largest city in each state	0.000111 (0.000428)	0.00402 (0.00849)	-0.0308 (0.0140)	-0.00149 (0.00109)	0.000769 (0.000506)	0.000748 (0.000485)
6: Basic specification, alternative legal coding (earliest year of enabling leg.)	0.000103 (0.000460)	0.0120 (0.0110)	-0.0417 (0.0167)	-0.00115 (0.00130)	0.00118 (0.000764)	0.00128 (0.000785)
7: Basic specification, alternative legal coding (latest year of enabling leg.)	0.000262 (0.000463)	0.0121 (0.0122)	-0.0314 (0.0161)	-0.00140 (0.00129)	0.000843 (0.000683)	0.000809 (0.000695)

Notes: The top entry of each cell is the estimated coefficient on urban renewal funding per capita from a separate instrumental variable regression. Heteroskedasticity-robust standard errors are adjusted for correlation within states and reported in parentheses below the coefficient. The timing of state-level enabling legislation instruments for urban renewal funding. The “basic specification” includes regional fixed effects and the set of city characteristics described in the text; the implicit first-stage for the basic specification is identical to column 2 of table 1. See table 1’s notes for variable definitions.

Sources: Housing and population data are from Haines (2004) with the exception of 1980 median schooling data, which we collected from the 1980 Census of Population, and 1950 dilapidated housing and plumbing data, which we collected from the 1950 Census of Housing. State enabling legislation data for rows 1 to 5 are from *GUAD* (Aiken and Alford 1972); in rows 6 and 7 the coding is based on our reading of many sources discussed in the text. Urban renewal funding data are from the *Urban Renewal Directory* (HUD 1974).

Table 4: Urban Renewal Effects, including Controls for Endogenous Population Characteristics

	Ln median family income	Ln median property value	Employment rate	Poverty rate	N
1: Basic specification	0.000256 (0.000113)	0.000774 (0.000327)	0.00328 (0.00213)	-0.00619 (0.00513)	458
2: Basic specification plus controls for proportion black and median education in 1980	0.000310 (0.000128)	0.000875 (0.000362)	0.00438 (0.00241)	-0.00850 (0.00448)	458

Notes and sources: See table 2.

Table 5: Urban Renewal Effect on Residential Segregation in 1980

	1	2	3
Coefficient on UR funding	-0.000043 (0.000119)	0.000169 (0.000306)	0.000157 (0.000251)
Control for 1950 segregation	No	No	Yes
Census division fixed effects	Yes	Yes	Yes
N	458	75	75

Notes: Each coefficient is from a separate instrumental variable regression that includes census division fixed effects and the set of city characteristics described in the text. Column 1 includes all available cities. Column 2 is the same specification as column 1 but excludes the cities for which there is no 1950 segregation measure. Column 3 adds a control variable for segregation in 1950. Heteroskedasticity-robust standard errors are adjusted for correlation within states. City-level residential segregation is measured as a dissimilarity index across central-city census tracts. For 1980, we calculated the index using the original 1980 tract data from Summary Tape File 3A (U.S. Department of Commerce 1982). In this table's analysis, the Pacific and Mountain census divisions are treated as a single census region category due to the small number of cities in the Mountain region with 1950 segregation measures. Sources: Housing and population data are from Haines (2004) with the exception of 1950 dilapidated housing and plumbing data which we collected from the published volumes of the 1950 Census of Housing. We compiled Urban Renewal funding data from the *Urban Renewal Directory* (HUD 1974). State enabling legislation data are from *GUAD* (Aiken and Alford 1972). The city-level residential segregation figures for 1950 are from <http://trinity.aas.duke.edu/~jvigdor/segregation/> and originally used in Cutler, Glaeser, and Vigdor (1999).

Table 6: Urban Renewal Effects on African-American Outcomes in 1980

<i>Panel A</i>	Ln Median Family Income	Ln Median Value	Employment Rate	Poverty Rate
Basic specification	0.00101 (0.00058)	0.00121 (0.00066)	0.01057 (0.00937)	-0.01755 (0.01786)
N	346	346	346	346
<i>Panel B</i>	Median Schooling	Proportion Old Housing Units	Proportion w/o Full Plumbing	Ln Black Population
Basic specification	0.00308 (0.00175)	-0.03572 (0.01861)	-0.00367 (0.00325)	0.00452 (0.00259)
N	346	346	346	346

Notes: Each coefficient is from a separate regression that includes regional fixed effects and the set of city characteristics described in the text. Heteroskedasticity-robust standard errors are adjusted for correlation within states. See table 1's notes for variable definitions. Some cities lacked black-specific outcome data, hence the smaller sample than in table 2.

Sources: Housing and population data are from Haines (2004) with the exception of 1980 median schooling, poverty, and employment data (which we collected from the 1980 Census of Population), 1980 old and owner-occupied units data (which we collected from the 1980 Census of Housing), and 1950 dilapidated housing and plumbing data (which we collected from the 1950 Census of Housing). State enabling legislation data are from *GUAD* (Aiken and Alford 1972) and Urban Renewal funding data are from the *Urban Renewal Directory* (HUD 1974).

Appendix Table 1: Summary Statistics

Variable	Mean	Std. Dev.
UR funds per capita (1950 population)	177.043	221.444
Years of potential participation in UR program	22.581	4.266
Ln population 1980	11.297	0.887
Ln median family income 1980	9.827	0.172
Employment rate 1980	92.632	2.925
Proportion of families in poverty 1980	11.040	5.143
Median years of schooling 1980	12.467	0.717
Proportion black 1980	16.136	17.820
Ln housing units 1980	10.382	0.896
Ln median property value 1980	10.627	0.364
Proportion of units built before 1940	37.401	19.070
Proportion of units crowded 1980	4.208	3.538
Proportion of units w/o full plumbing 1980	1.66	0.907
Proportion of units owner-occupied 1980	54.327	11.325
Ln population 1950	11.090	0.879
Ln median family income 1950	8.120	0.175
Employment rate 1950	94.950	2.018
Proportion of families with income under \$2000 in 1950	21.410	8.997
Median years of schooling 1950	10.310	1.268
Proportion nonwhite 1950	9.282	11.816
Ln housing units 1950	9.901	0.885
Ln median property value 1950	9.027	0.293
Proportion of 1950 units built before 1920	49.414	21.784
Proportion of units dilapidated	6.623	5.578
Proportion of units crowded 1950	12.727	6.587
Proportion of units w/o full plumbing 1950	21.723	13.412
Proportion of units owner-occupied 1950	52.317	11.690
Proportion of employment in manufacturing 1950	29.508	15.247
New England	0.120	
Mid Atlantic	0.157	
East North Central	0.245	
West North Central	0.083	
South Atlantic	0.116	
East South Central	0.055	
West South Central	0.085	
Mountain	0.039	
Pacific	0.100	

Appendix Table 2: OLS Results for Comparison with Table 2

<i>Panel A: Population and Labor Market Outcomes in 1980</i>						
	Ln Population	Ln Median Family Income	Employment Rate	Poverty Rate	Median Schooling	Proportion Black
Approved	.0000086	-.0000371	-.0014021	.0005116	.0001091	.0038598
UR funds	(.0000504)	(.0000213)	(.0006128)	(.0008834)	(.0000807)	(.0025046)
N	458	458	458	458	458	458
<i>Panel B: Housing Market Outcomes in 1980</i>						
	Ln Housing Units	Log Median Value	Proportion Old	Proportion w/o Full Plumbing	Proportion Crowded	Proportion Owner Occupied
Approved	.0000323	-.0000747	-.0053381	-.0003936	-.0014736	.0001131
UR funds	(.0000479)	(.0000467)	(.0023411)	(.0001906)	(.0005791)	(.0016279)
N	458	457	458	458	458	458

Notes and sources: See table 2.