

**Measuring Economic Distress:**

**A Comparison of Designations and Measures<sup>1</sup>**

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Many federal agencies involved in economic development provide special programs for areas of great need. These programs are often implemented on the basis of statistical measures of economic hardship. The underlying rationale for such targeting usually is strongly related to the measure of what is commonly referred to as “economic distress.” The use of terms such as distress is meant to signify the starkly different experiences of communities, based on high unemployment, low income, high poverty, unstable economies, population outmigration, or other socioeconomic problems. Despite the unanimity of concern, to date, no universally accepted measure of distress has emerged. Instead, federal agencies, development organizations, and state development offices, among others, employ a variety of metrics in line with their goals. In all cases, these choices are constrained by data availability, timeliness, and spatial aggregation.

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This paper explores the use of different measures of economic health and distress primarily in relationship to rural areas. It begins with a quick review of some of the more common measures used by organizations concerned about economic distress. It then presents an economic health index (EHI) we developed in earlier research for the Appalachian Regional Commission. Changes in the counties qualifying as distressed under the EHI from 1960 through 2000 are analyzed.

Perhaps not surprisingly, we found that regardless of the measure used, there is a core pool of long-term economically distressed counties in the U.S. However, over the last 40 years, political exigencies have forced many development policies to be increasingly flexible and inclusive, often enlarging the number of places eligible to receive funding and thereby diluting the efficacy of place-based designations of need. The meaning of "distress" has often become more blurred and imprecise over time. Targeting places in greatest trouble or need has been largely abandoned and replaced with designations that emphasize cyclical downturns rather than structural impediments. The distribution of dwindling pools of resources has become increasingly diffuse and thus less able to demonstrate real impact over time.

One recommendation growing out of this research is to compare and contrast the many measures being used and to settle on a set of benchmarks that all programs can comfortably work with to identify places at risk. Greater specificity and precision in resource allocation will be required if programs are to make a sharp difference in the fate of distressed locations. This of course begs the questions: what has been the impact of the severe cutbacks in aid to distressed areas over the last 20 years, and what amount of aid is needed to address the underlying problems of persistent distress?

### **The General Practice of Designating Places of Distress**

A survey of agencies' distressed area definitions for the Appalachian Regional Commission in 1995 suggests that a diverse set of agencies at the federal and state levels makes distinctions among locations based on the severity of economic circumstances (Fullenbaum and McNeill, 1995). A few of the federal programs for places in distress are outlined here.

The U.S. Department of Agriculture's (USDA) rural development programs cover housing, electricity, water and sewer, empowerment zones, and enterprise communities. Each of these programs targets benefits to specific types of rural areas, using population size criteria and economic distress indicators.

The Economic Development Administration (EDA), under numerous program titles, makes special provisions to fund projects in areas of economic distress. In accordance with the Area Redevelopment Act (Public Law 87-27), in 1965 the EDA designated "Redevelopment Areas," which included counties or clusters of counties, county equivalents, or Indian Reservations within the U.S. As described further below, EDA's measures of distress have changed over the years.

The Housing and Urban Development (HUD) Agency's Community Development Block Grant (CDBG) program contains a special provision for areas with persistent economic problems or distress. Other HUD programs that recognize special local circumstances include the Home Investment Partnership, urban revitalization, and Moving to Opportunity programs.

The Federal Emergency Management Agency (FEMA) provides resources to areas with high levels of need through its emergency food stamp (in conjunction with

USDA) and shelter program. Other agencies, including the Bureau of Indian Affairs and Tennessee Valley Authority (TVA), also acknowledge the special circumstances of distressed areas.

The ARC survey is by no means totally inclusive, but it does provide a sense for the variation in indicator usage across a range of programs, and states within and outside the ARC region. Based on that study's findings, most agencies use absolute indicators of eligibility, such as a poverty rate of more than a certain percentage. A smaller sub-set of programs uses ranked measures, such as an unemployment rate that is some percentage point(s) above the state or national unemployment rate. Regardless of rank or absolute measure, most measures of distress use some combination of high unemployment, high poverty, and low income to determine distressed status. Other indicators that may be used include population loss, outmigration, poor housing conditions, or low educational attainment.

The geographic unit of analysis also varies by program and shows a wide range of geographic eligibility. While counties are the basic unit of analysis, school districts, communities of a specific size (for example, fewer than 10,000 residents), political subdivisions of various sizes and types, tribal service areas, census tracts, metropolitan areas, states, state subregions, and housing developments qualify for special designation depending on program design and goals. Variation in the unit of analysis obviously makes determination of distress somewhat difficult, given that some indicators are not readily available or are not available in a timely fashion for most small geographic areas.

Perhaps the largest data timeliness problem plaguing most of these programs is the infrequency of poverty measurement. Poverty statistics are based on the decennial

census. At significant cost, communities can purchase special estimates between the decennial censuses. While the U.S. Department of Commerce, Bureau of the Census, publishes intercensal estimates of state and county poverty rates, these estimates are available about two years after the year of the poverty estimate and the estimates tend to decline in reliability as they get farther from the census base year. Also, the decennial poverty rate does not co-vary in time with annual indicators such as unemployment rate or levels of income. Given the potential susceptibility of distressed places to fluctuations in the business cycle, which can have short-term and direct impacts on poverty levels, the lack of timely data presents a serious problem.

### **Evolution of EDA Distress Criteria**

To give an idea of how agency definitions may change over time, we briefly review the history of the EDA distress indicators. In the early 1960s, the Area Redevelopment Administration (ARA, the precursor to the EDA) developed criteria to discern places of economic hardship. Although they were never formally calculated into a cumulative index, the criteria were instrumental in the distribution of redevelopment funds. As shown in the following box, ARA's 5(a) and 5(b) criteria emphasized attributes that would even today be associated with economic distress. Using these criteria, a total of 166 counties or county equivalents met the 5(a) criteria and 746 met the 5(b) criteria.

*5(a) and 5(b) Criteria*

Redevelopment Areas, in accordance with sections 5(a) and 5(b) of the Area Redevelopment Act, included areas that met the following criteria:

- For 5(a) designated areas, nontemporary unemployment was at least 6 percent at the time of designation and had averaged at least 6 percent for either
  - 1) 3 out of the preceding 4 years and had been 50 percent or more above the national average or
  - 2) 2 out of the preceding 3 years and had been 75 percent or more above the national average or
  - 3) 1 out of the preceding 2 years and had been 100 percent or more above the national average.
- 5(b) Redevelopment Areas were based upon one or more of the following criteria:
  - 1) low income
  - 2) low farm income
  - 3) low level of rural development
  - 4) low production farming
  - 5) very small area of substantial and persistent unemployment
  - 6) other needs

In 1968, EDA was instructed to develop further criteria to identify distressed areas. In addition to the criteria applied by ARA, EDA employed four additional characteristics: (1) areas with mean family incomes not exceeding 40 percent of the national median; (2) Indian reservations manifesting the greatest degree of economic distress; (3) areas previously designated by ARA, subject to yearly review on the basis of EDA criteria; and (4) status as the one area that most nearly qualified for designation in states that otherwise had no designated areas. Places where economic change would likely lead to high unemployment also could be designated. This last provision improved upon ARA practice by providing the Secretary of Commerce with the flexibility to deal

with emergency situations such as natural disasters or other unexpected sources of high unemployment.

Over the life of EDA, particularly in the early 1970s, the number of designated areas grew in response to both political and economic realities. One such designation was areas of short-term unemployment. New legislative mandates also expanded the types of counties that could receive assistance. Distressed urban areas were included in the agency's realm of responsibility under Title 1. Also, an adjustment was made to the income-level criterion in 1971. Originally set at 40 percent of national median family income, this figure was increased to 50 percent, qualifying an additional 130 counties.<sup>2</sup>

Further complicating the meaning of the distress designation was the fact that a moratorium passed in 1970 disallowed de-designation of a locality without prior consent. Once designated, a county remained a potential recipient of EDA assistance indefinitely. While EDA staff could and did restrict funding to counties that failed to demonstrate true need, nonetheless, from a congressional point of view, more than half of all U.S. counties qualified for assistance. A final change in designation in the early 1970s further expanded the types of areas eligible for EDA support. Following the logic of the "growth center" concept, areas that were within an economic development district, but not within a redevelopment area, could receive support if the applicant could demonstrate that the redevelopment area would benefit from the project's funding.

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<sup>2</sup> The use of median family income proved problematic given it was calculated on a decennial basis whereas the data were needed on a timelier basis.

In 1970, 983 areas qualified for EDA assistance; by 1973, that number had nearly doubled, to 1,818. Forty percent of the newly qualifying areas entering EDA's ranks between 1970 and 1973 were localities experiencing short-term unemployment.

The reauthorization of EDA in 1998 stabilized the designation of distress and made more concrete and explicit the criteria used for designation. To be eligible for EDA funding, an area must demonstrate high unemployment, low income, or special circumstances that threaten to cause local economic distress. According to EDA regulations, an area is eligible for project grants under Sections 305 (Public Works) and 308 (Economic Adjustment) if it had specific scores in terms of unemployment, per-capita income, and special needs (see following box).

EDA criteria 1998

“An **unemployment rate** that is, for the most recent 24-month period for which data are available, at least one percent greater than the national average unemployment rate. For example, if the national unemployment rate is 6 percent, an area is eligible under this provision if it has an unemployment rate of 7 percent.”

“**Per capita income** that is, for the most recent period for which data are available, 80 percent or less of the national average per capita income.”

“A **special need**, as determined by EDA, arising from actual or threatened severe unemployment or economic adjustment problems resulting from severe short-term or long-term changes in economic conditions. These include outmigration or population loss, natural disaster, and military base closure.”

### Evolution of the ARC Distress Index

Prior to the creation of the ARC's distressed counties program in 1974, ARC Demographer Pickard experimented with the construction of a 1960 composite indicator

of socioeconomic status. He constructed four indexes: poverty-population; low educational status; labor force participation and unemployment; and substandard housing. He combined these factors into an additive index. Based on this analysis, he rank-ordered the counties from those with high scores (low socioeconomic status) to those with low scores (high socioeconomic status).

Based on Pickard's 1960 index ranking, of the top 50 counties considered distressed, 29 were in the state of Kentucky and another 12 were in Tennessee. The ARC's 1980 distressed index identified a large number of the same distressed counties. Familiar names such as Owsley, Magoffin, McCreary, and McDowell (counties in Kentucky) and Lincoln, Webster, and Calhoun (counties in West Virginia) exhibited low levels of economic health in both 1960 and 1980. Harkening back to Pickard's comments of 1974, the troubled areas of the ARC region reflect:

. . . an axis of "hard core" severely distressed counties that extends from Preston Co., WV, southward through eastern Kentucky to the Tennessee Cumberlands. Most of the counties, which deteriorated to severe distress, were west of this axis in Kentucky or to the southwest in Tennessee, Alabama, or Mississippi, with only a few scattered counties to the east or southeast. Most of the counties that improved from severe distress in 1959–1960 were south and east of this axis, with a few farther north in southern Ohio and Pennsylvania (Pickard, undated).

In reaction to President Ronald Reagan's quest to dismantle development programs, in the early 1980s, the ARC was instructed to establish a "Finish Up" program. Thus in 1980 the ARC created the Distressed Counties program and used an index to identify counties eligible to receive funds under the new designation. To this day, the ARC uses a five-category scale to describe the economic status of counties under its auspices. This scale, in which 1 describes the "worst" case and 5 describes the "best"

case, is based upon three underlying criteria: poverty level, unemployment rate, and market income. Rankings are applied to member counties based upon (1) their relative level on each of these distress measures in comparison with U.S. averages; and (2) how many of the three measures are below threshold values in comparison with national averages. Table 1 summarizes the criteria for designation along the 5-point scale.

**Table 1. ARC Distressed County Designation Criteria**

Designation	Unemployment: 3-year avg.		Market Income: Per capita		Poverty Rate: 1990 Census		
1. Severely Distressed	>= 150% of U.S.	&	<= 67% of U.S.	&	>= 150% of U.S.	Or	2 x U.S. poverty plus one other indicator
2. Distressed	>= 125% of U.S.	&	<= 67% of U.S.	&	>= 125% of U.S.	&	Not severely distressed
3. Middle	All other counties						
4. Strong	<= 100% of U.S.	&	>= 80% of U.S.	&	<= 100% of U.S.	&	Not very strong
5. Very Strong	<= 75% of U.S.	&	>= 80% of U.S.	&	<= 75% of U.S.		

Source: ARC documents.

Under this rating scheme, for analytical purposes, counties with a distress scale rating of 1 or 2 are considered distressed, while those attaining higher ratings are considered non-distressed. Category 1 severely distressed counties are the only group eligible to receive special set-aside funds.

In earlier work, we attempted to ascertain the efficacy of the ARC index to identify counties in economic distress. The strength of the measure is its ease of computation. This very ease of calculation, however, presents recurring problems as the index is insensitive to intercensal changes and can inadvertently trap a county within a category, simply because the data are categorical rather than continuous. Using the ARC

definition, we confronted the problem that the allocation of counties was not based on a summary measure derived from continuous or interval data, but rather was determined by counties meeting certain thresholds. By implication, ARC's procedure converted data with considerable variation (actual income levels, unemployment rates, and poverty rates) into data with much less variation, with each county no longer analytically distinguishable from other counties in the same category. Moreover, the lack of an additive continuous measure highlights a problem: a very insignificant shift in one of these three variables can cause a highly significant change in "outcome." Therefore, if a county is close to a relevant "cutoff" level for poverty, unemployment, or income, a very slight shift in one of these values can cause a distress ranking change. In other words, because the ARC measure reduces the data to categories, change would be more reflective of *where* a county was along the three scales rather than the *magnitude* of the change itself.

Because the decennial poverty rate is fixed for 10 years, year-to-year movements in ARC-measured distress status are a function of shifts in market income and unemployment. And of those two, unemployment is by far the more volatile indicator. Thus, the year-to-year instability of rankings on the 5-point scale, and the probable lags among unemployment, poverty, and income, and variables that might underlie such measures, render it difficult to pinpoint secondary variables that make significant contributions to the measure of economic distress.

### **Our Economic Health Index**

In an effort to retain as much information about the experiences of distressed counties as possible, we developed a surrogate index that we call an index of "economic

health.” This index simultaneously captures the underlying characteristics of interest (unemployment, income) and additional characteristics that relate to the health and effectiveness of the local labor market (percent of population that is economically dependent and the share of income from transfer payments). This index was first used in 1996 in research examining the efficacy of the ARC Distressed Counties Program. We subsequently have used it to compare the development experience of EDA-designated counties with a continuous measure of economic distress.

***Elements of the Economic Health Index.*** After considerable deliberation, we chose to develop an additive economic health index (EHI) that includes four ratios. Drawing in part on the ARC’s and the EDA’s traditional measures of economic health, but with some significant additions, the four individual measures are a per-capita income index that compares a county’s income level to the national level ( $PCMI_{idx}$ ); an unemployment rate index that compares the county-level unemployment rate to the national unemployment rate ( $URT_{idx}$ ); a labor force to total population ratio index ( $LFPOP_{idx}$ ); and a per-capita transfer payments to per-capita income ratio index ( $TFP_{idx}$ ). The use of these four indicators was designed to shed light on the degree to which the experience of individual counties deviates from national norms. We interpret the index such that high scores indicate economic distress and low scores indicate national average or better conditions. The inclusion of measures of transfer payments and labor force participation was designed to assess the extent to which the population depends on unearned income (transfer payments) and the share of the population that depends on the labor of others. We were concerned about the availability of underutilized human resources; similarly, we also were interested in the extent to which large segments of the

population were not participating for any reason in wage-earning activities. For more detail on and further specification of the variables in the index, request more information from the authors.

### **Evaluation of the Index**

The strength of the index is that it not only allows annual analysis of a county's economic condition, but also permits an examination of distress that had been obscured by most other measures of distress and their categorical composition. The EHI evaluates each county relative to all others, and tracks changes in county scores over time. At the same time, the index allows us to examine the condition of counties on an annual basis. Information gained from it assists policy makers in ranking counties based on the most current data available.

A large number of counties received an index score of less than 100. These counties reflect very good economic health and do not appear to experience volatility over time. There were reasonable breaks between groups of counties that scored between 100 and 149 (at or slightly above the national average), 150 and 199, and 200 and above.

Based on these breaks, we group the counties as follows:

Category 1	Counties scoring below 100	Very good economic health	
Category 2	Counties scoring 100 to 149	Good economic health	
Category 3	Counties scoring 150 to 199	Poor economic health	distressed
Category 4	Counties scoring 200 and above	Very poor economic health	

Counties in categories 1 and 2 have very good or good economic health, and counties in categories 3 and 4 have poor or very poor economic health, reflecting economic distress.

### **Economic Distress is a Chronic Illness**

It is important to note that 79.3 percent of counties that ranked 1 or 2 in 1960 also did so in 2000 (Map 1). Thus the majority of counties over the four decades enjoyed relatively good economic health. At the same time, 20.7 percent of those that ranked 1 or 2 in 1960 ranked 3 or 4 in 2000. In other words, 20.7 percent that weren't distressed in 1960 were distressed in 2000 (though about 30% of these new entrants had a score in the 150-160 range, just above the good-to-poor cutoff).

The more striking finding is that comparing 1960 to 2000, we see a significant pattern of both distress and the persistence of distress over time. Three-quarters of the distressed places in 1960 remained so in 2000 (Map 2). A modest number of counties (23.1%) designated distressed in 1960 moved out of distress by 2000. However, about 40 percent of those 'leavers' were in the 140-150 range in 2000, making them borderline distressed.

Moreover, if we examine the number of counties registering distress across the four decades we see considerable numbers of new entrants through time (Map 3). As seen in Table 2, in 1960, 519 counties were designated 3 or 4. The number of counties in economic distress declined to 446 in 1980, but jumped to 648 in 1990. By 2000, there were almost twice as many counties ranked 3 or 4 as there were in 1960.

Table 2

#### Number of Counties Ranking 3 or 4 on the Economic Health Index, 1960-2000

- In 1960 there were 519 counties ranked 3 or 4
- In 1970 there were 518 counties ranked 3 or 4
- In 1980 there were 446 counties ranked 3 or 4
- In 1990 there were 648 counties ranked 3 or 4
- In 2000 there were 927 counties ranked 3 or 4

Additional research suggests that the increase in the number of distressed counties is due to several factors. One factor was the rapid rate of growth of both income and employment in urban areas that raised the national average income and lower the national average unemployment rate. A second, unrelated factor was the decline in manufacturing and agriculture in rural areas, nationally, but most clearly in the South. That decline was somewhat regionally balanced, however, by the overall improvement of many places in the South and the growth of poor populations associated with Latino migration to the West. The overarching trend is that the wealthier parts of the country are leaving the nation's rural areas and areas dominated by natural resource exploitation and agriculture behind.

### **The Geography of Distress**

Map 2 identifies those counties ranked 3 or 4 in 1960 and 2000. More than anything this map highlights the regions of economic distress. Counties in poor economic health in both 1960 and 2000 are clustered in Appalachia, the Mississippi Delta, Oklahoma, the U.S.-Mexico border, the Southwest, the Upper Peninsula of Michigan, and the eastern part of Montana.

Surprisingly few places have left the distressed designation over the forty-year period. The spatial distribution of counties that were distressed in 1960 but not in 2000 appears to be relatively random. The exception is a slightly higher frequency of counties leaving distress in some parts of the South, and in particular Arkansas. However, the South had a larger absolute number of counties in distress in 1960 than any other region.

Moreover, the South appears to have added a large number of new entrants that were not distressed in 1960 but that became distressed in 2000.

Counties that entered the distressed category were located in the border region with Mexico, the southwestern Indian reservations, southeastern Ohio, northern Michigan, and the northern timber and agricultural counties of California. Overall, a more concentrated pattern of counties entered the distressed category in 2000 compared with 1960, suggesting geographic consolidation of new entrants over the study period.

### **The Determinants of Changing Patterns of Distress**

What are the reasons for the distribution of distress? To answer this question, multiple regression models were used to statistically identify socioeconomic factors most closely associated with differences in distress levels as shown by EHI. Separate analyses were run for the years 1970, 1980, and 1990.<sup>3</sup> We also ran an additional regression analysis using the 2000 index of economic health as the dependent variable. We regressed the 2000 index on 1990 county characteristics to determine the extent to which the 1990 attributes of places were correlated with later years of economic distress.

In the first analysis, we examined the relationship of six variables to economic health: previous economic health as measured by EHI (score from ten years prior); urban population; race; educational attainment; dependent population, and employment by industry (including agriculture, fisheries, and forestry; manufacturing; and mining). Regional “control” variables were included in all models (nine regions in the contiguous

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<sup>3</sup> The regression analysis is limited to decennial census years due to limited data availability in off-census years.

United States as determined by the Office of Management and Budget) to control for the effects of regional variation on the models.

Inclusion of independent variables in the models was based upon two criteria: (1) variables had to be available for each of the years modeled to enable inter-temporal comparisons; and (2) variables included in the models were assumed to have a positive or negative effect on county-level economic health. Specifically, it was assumed that increased urbanization, higher rates of educational attainment, and lower percentages of minority populations were associated with strong economic performance, while a high dependent population (which includes children and the elderly, who are considered dependent because they typically do not participate in the workforce) was associated with weaker economic performance. Furthermore, we assumed that increased employment in manufacturing was positively associated with economic performance. Our hypotheses regarding employment in mining as well as employment in agriculture, fisheries, and forestry were less strong; these variables, like the regional variables, were included primarily as “control” variables.

The strongest predictor of economic well-being was past economic performance as measured by previous decadal economic health. We included a county’s index score from ten years prior to the other variables in the model. It was by far the best predictor of current economic health.

Not all of the variables in all of the models were significant. For example, urban population was not significant in any of the years modeled, meaning that after accounting for the other variables included in the models, there was never a significant correlation between economic health and urban population. This result was surprising, as we

expected urbanization to be associated with better economic health. However, the lack of significant association between economic health and urbanization may reflect the definition of urbanization, as “urbanized areas” according to the U.S. Census can be rather small, and their sizes vary widely. Moreover, U.S. population is highly urban to begin with and thus may vary relatively little over time. Dependent population was not significant in 1970, but higher dependent populations were significantly associated with poor economic performance in 1980 and 1990. In the 1970 model, percent white population, though significant, was a weak contributor to the model. Over time, higher county-level minority populations were associated with weaker economic performance. Educational attainment was the second best predictor of economic health in both the 1980 and 1990 models, and the third best predictor of economic performance in the 1970 model. In all years, higher educational attainment levels were associated with better economic performance.

The employment by industry variables produced more complex results. Employment in agriculture, fisheries, and forestry demonstrated a positive association with strong economic performance in 1970 and 1990, but a negative, albeit less strong, correlation with economic health in 1980. Thus, where employment is strong in agriculture, economies are generally doing well. The employment in mining variable also demonstrated a variable effect upon economic conditions over time, though in two of the three years mining was a poor predictor of economic performance relative to the other variables in the models. In 1970 and 1980, increased employment in mining was correlated with better economic performance. In 1990, this correlation was probably associated with a rise in energy prices. Though slight, the association between mining

and poor economic performance in 1990 was likely indicative of the long-term trend of increased mechanization in the mining industry, with areas of high mining often having relatively high unemployment compared with much of the rest of the United States.

Employment in manufacturing demonstrated a strong, positive association with economic health in 1970 and 1990, though in 1980 it did not contribute to economic performance according to the model (Table 3).

**Table 3.**  
**Effect of Demographic and Employment Characteristics on Economic Health Index, for Counties (beta coefficients)**

	1970	1980	1990	2000
Index Score Previous Decade	.777*	.693*	.795*	.775*
Urban Population	NS	NS	NS	NS
Dependent Population	NS	.076*	.101*	.036*
White Population	.034*	-.067*	-.107*	.078*
Educational Attainment	-.191*	-.184*	-.310*	-.084*
Employment in Agriculture, Fisheries, or Forestry	-.218*	.110*	-.269*	.154
Employment in Mining	-.059*	-.133*	.045*	.199*
Employment in Manufacturing	-.175*	NS	-.183*	.054
Adjusted R <sup>2</sup>	.719	.696	.795	.852

\* Significant at the .001 level or above; data for 3,069 counties.  
NS Indicates variable was not significant

In general, educational attainment was an especially strong predictor of economic health in each of the years studied. Employment in agriculture, fisheries, and forestry made an exceptionally strong contribution to the models as well. Strong economic conditions have been observed in the nation's agricultural heartland in all of the years. Employment in manufacturing also appears to have had a fairly strong and positive long-term relationship with economic performance. Employment in mining was a relatively small contributor to economic health, except in 1980 when mining areas enjoyed at least some short-lived prosperity due to a rise in energy prices. A large dependent population and a large minority population both have had an increasingly stronger, negative association with economic health over time. Most importantly, however, past economic performance is by far the best predictor of current economic performance. This indicates that agency efforts to address economic distress are likely hindered by persistently poor economic conditions.

The results using a measure of distress for 2000 were remarkably similar to the findings of the earlier years. All but two of the variables were significant and with the expected sign. By far, previous decadal economic health score explained the majority of difference among counties in 2000.

### **Summary**

The poverty rate is the most common measure used to measure economic distress. In this analysis we demonstrate the value of an alternative measure that was explicitly designed to mimic the poverty rate while allowing researchers to examine economic distress at a highly disaggregated level, including both time and space. While there is

some variation at the margin, what is truly remarkable and disturbing is the persistence of distress in a select set of communities in the U.S.

Using our index, another noteworthy finding is the increase in the number of counties that are falling behind national averages over time. The jump between 1990 and 2000 is particularly striking.

Obviously, there is no perfect measure. Future research should include studies of both places that have left the higher ranking of economic distress (we have done that for the 20 counties that left the ARC distress designation between 1980 and 1995) and those that have newly entered. It is our hypothesis that growing economic distress is the result of both similar and different processes and that the underlying explanation for new places becoming distressed is changing through time.

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