United States General Accounting Office

GAO

Report to Congressional Requesters

April 1996

ECONOMIC DEVELOPMENT

Limited Information Exists on the Impact of Assistance Provided by Three Agencies

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-271391

April 3, 1996

The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

The Honorable James H. Quillen
House of Representatives

To support economic development and growth, communities typically rely on a patchwork of programs and draw funding from several federal agencies, as well as from states, local governments, and the private sector. The Appalachian Regional Commission (ARC), the Department of Commerce's Economic Development Administration (EDA), and the Tennessee Valley Authority (TVA) are three of the federal agencies whose programs provide economic development assistance.[1] As noted in discussions with your offices, recent hearings and floor debates have focused on the impact of the economic development assistance provided by these three agencies and the "performance ratios" they calculate. As used in this report, a performance ratio is a comparison of the total dollars invested in or planned for an economic development project—including the funding from other federal programs—with the dollars contributed by the agency itself. Thus, the performance ratio is seen as a measure of the extent to which other federal, state, local, or private investment is attracted to a project as a result of the agency's investment. As such, it is one measure of how an agency's programs meet their goals.

This report responds to your request for information on what is known about the impact of the economic development assistance provided by ARC, EDA, and the nonpower programs in TVA and on how the cited performance ratios were calculated. Specifically, you asked us to

- review studies that evaluate the impact on economic development of these agencies' programs and
- determine how the performance ratios used by the three agencies were calculated.

As agreed with your offices, we did not attempt to independently assess the impact of the programs.

[1]The December 1994 Catalog of Federal Domestic Assistance includes more than 340 programs related to economic development operating out of 28 federal departments and agencies.

Results in Brief

In our review of the literature available, we were unable to find any study that established a strong causal linkage between a positive economic effect and an agency's economic development assistance. While we found several studies that examined particular locations, projects, or programs within ARC or EDA, only two studies attempted to address the overall impact of an agency's assistance on economic development. These two studies—a 15-year-old study of EDA and a 1995 study of ARC—were able to establish only a weak linkage between economic development and an agency's programs. No definitive conclusions can be reached from this limited amount of research. We found no studies that provided significant information on the impact of TVA's economic development programs. That we found such limited research is not surprising because conducting a persuasive study of impact—one that documents an improvement, links it to an agency's programs, and rules out alternative causes—would be extremely difficult. From the 1995 ARC study, for example, it is impossible to say with certainty whether Appalachia's economy grew because of ARC or whether much of the measured growth was caused by the rising price of coal. Moreover, even if such an impact could be demonstrated, from a national perspective it may be important to know how much of the observed growth in the region was diverted from other parts of the country.

Each of the three agencies cites a 3-to-1 performance ratio, computed as a comparison of the total dollars invested in a project with the dollars invested in that project by the agency. However, each agency, in computing its ratio, defines "total dollars" differently and calculates the ratio for only a portion of its programs.

Background

ARC was established in 1965 to bring economically distressed counties in the 13-state Appalachian region into the economic mainstream. Serving about 21 million people in about 400 counties in Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia, ARC received appropriations of $282 million in fiscal year 1995. EDA was established in 1965 to target federal resources to economically distressed rural and urban communities across the country that were outside the mainstream economy and that lagged in economic development, industrial growth, and personal income. EDA received appropriations of $410 million in fiscal year 1995. TVA was established in 1933 to produce electric power for the Tennessee Valley region and to carry out several nonpower activities, including flood control, navigation improvement, soil replenishment, and the promotion of improved agricultural practices in the region. TVA serves an 80,000-square-mile area spanning seven states, including most of Tennessee and parts of Alabama, Georgia, Kentucky, Mississippi, North Carolina, and Virginia. TVA received $136 million in fiscal year 1995 to operate its nonpower programs. Appendixes I, II, and III provide overviews of the structure of ARC, EDA, and TVA, respectively, and of their programs related to economic development.

Limited Literature Available Does Not Link Economic Impact to Programs

We found several studies that examined particular locations, projects, or programs within ARC or EDA, but few studies that attempted to evaluate the overall impact of either agency's efforts on economic development. We found no studies on the impact of TVA's nonpower programs.

Few Studies Were Found on Economic Impact

From the more than 120 studies on ARC, EDA, and TVA's nonpower programs that we initially identified through literature searches and discussions with agency officials and economic development experts, only 22—9 studies on EDA and 13 on ARC—included an examination of the impact of an agency's programs. We found only two studies—a 1980 study on EDA and a 1995 study on ARC—that attempted to establish a cause-effect relationship between the agency's programs and economic development. No definitive conclusions can be reached from this limited amount of research. Although both studies relied on carefully chosen methodologies, as explained below, both found only weak causal linkages between economic development and the agencies' programs.

- A study by Martin and Graham (see app. IV), published in 1980, examined the effectiveness of EDA's programs implemented through 1975. The authors used an econometric model to determine the effect of changes in the magnitude, type, and timing of EDA's outlays on the rate of income growth. They found that income in the counties that received EDA funding grew significantly faster than income in the counties that received no aid. However, when the authors simultaneously considered EDA's programs and factors unrelated to EDA, they found that EDA's programs had a very small effect on income growth rates during the period that the aid was received and had no significant effect in the years after the aid ceased. EDA's programs could explain only a small part of the difference in these growth rates between the two groups of counties.
- A study by Isserman and Rephann (see app. IV), published in 1995, compared the counties served by ARC with "twin" control group

counties—counties that the authors intentionally selected as similar in important economic dimensions to the ARC-aided counties. The authors attempted to measure the impact of ARC's programs by examining the differences between the growth rates from 1969 through 1991 for the Appalachian counties and their twins. They found that the ARC-aided counties grew significantly faster than their twins in several factors, including per capita income. On the basis of this finding, they concluded that ARC had an overall positive effect. The authors used a multivariate regression analysis of many descriptive variables to test possible explanations for the differences in the growth rates. However, they found that a model that included ARC and non-ARC variables could explain at most 15 percent of the variation in the differences in the growth rates. The variables related to ARC's programs were almost never statistically significant.

We found no studies that provide significant information on the impact of TVA's nonpower programs.

A list of the studies we found that examined the impact of the agencies' programs on economic development appears in appendix IV.

Studies Showing Impact Are Difficult to Perform

While we found few published studies on the impact of the three agencies' economic development programs, we recognize that successfully completing such studies would be difficult. A persuasive study of a program's impact would require three elements. First, it would have to document that there had been some improvement in the targeted area. Second, it would have to link specific elements in the program to the economic changes. Finally, it would have to measure the growth stemming from other influences on the region's economy in order to isolate the impact that could be attributed to the economic development program.

Studies establish that economic growth has occurred in the targeted areas. For example, the Isserman and Rephann study shows that the counties served by ARC have grown in population and per capita income relative to comparable counties that are not served by ARC. However, no comprehensive studies link this growth to an agency's programs—for instance, a highway construction program leading to growth in manufacturing. And no studies effectively rule out other explanations for the observed growth. For instance, how much of Appalachia's growth can be attributed to ARC's programs and how much to the sharp increase in coal prices that occurred in 1974?

Linking a positive impact on economic development to a specific program's features is a substantial undertaking. Each agency has funded a variety of programs, some for a few years, some for considerably longer. The task of determining a program's expenditures on roads or health care, for example, by locality or county and then correlating these expenditures with local outcomes would be daunting. Only one study (Isserman and Rephann) attempted anything like this, and that study found that only a small part of the overall growth of Appalachia could be linked to specific variables, a few of which represent ARC's programs.

The task of considering alternative explanations for the observed growth is even more substantial. A study of the growth of Appalachia would need to consider not only Appalachia's growth relative to that of the rest of the United States, but also factors such as whether this growth was concentrated in coal mining areas during periods of high prices or concentrated in counties that eventually became part of Atlanta's suburbs. Numerous federal programs provide assistance that may promote economic development, further complicating efforts to isolate the impact of a particular program. Indeed, as we reported to the House Committee on the Budget last year,[2] 28 executive departments and agencies identified 342 federal assistance programs related to economic development in the December 1994 Catalog of Federal Domestic Assistance.

Additionally, any study of the impact of assistance on economic development would have to consider both regional and national perspectives. ARC and TVA are charged with the development of their regions. Thus, from the perspective of these agencies or the residents of these regions, employment that comes at the expense of another region may be regarded as a gain. However, a cost-benefit study taken from a national perspective would have to consider not only whether a region has undergone relative growth, but also the extent to which such growth has come from diverting another region's growth. Such a study might also consider the extent to which federal dollars are replacing state and local spending. No study that we could identify attempted this analysis. As requested by the House Committee on the Budget, we are currently examining the extent to which the design of a grant program results in this type of fiscal substitution.

[2]Economic Development Programs (GAO/RCED-95-251R, July 28, 1995).

No Consistent Method Is Used to Compute Performance Ratios

Each of the three agencies cites a 3-to-1 performance ratio, comparing the total dollars invested in a project with the dollars invested by the agency. However, the agencies include different components. For example, ARC does not include funding from private sources in the total dollars, while both other agencies do. Also, each agency calculates the ratio on the basis of only a portion of its programs. For example, ARC computes its ratio on the basis of its nonhighway programs, which represent about one-third of its funding; EDA calculates its ratio using two of its nine programs; and TVA derives its ratio from programs that represent about 15 percent of its nonpower funding. The methods the agencies use to compute their performance ratios are as follows:

- ARC computes its 3-to-1 ratio by comparing the total cumulative public funding, including the funding from other federal agencies, for the nonhighway projects implemented since 1965 with ARC's portion of that total. Nonhighway projects have historically accounted for about one-third of ARC's budget. ARC does not include funding from private sources in its computation. According to ARC documents, the highway program was not intended to attract other federal funds. ARC officials contend that 3 to 1 is a very conservative ratio because ARC counts only additional funding from public sources for the particular piece of a project that ARC is funding. For example, if ARC is funding a water line connected to a new industrial plant, ARC counts only other contributions for the water line, rather than contributions for the entire plant.
- EDA calculates its 3-to-1 ratio using data from two of its nine programs: the economic adjustment revolving loan fund program and the public works program. The ratio for the revolving loan fund compares the total estimated private investment in a project with the total loan capitalization, which includes both EDA grants and local matching contributions, and the annual repayments available for relending since 1975. According to EDA officials, the ratio for the public works program is a direct comparison of the estimated funding for a project from private and nonfederal sources with the funding from EDA since 1979. The two ratios are averaged and then the averaged ratio is reduced by 50 percent. The averaged ratio is reduced, the EDA officials explained, because it is based on estimates received from grant applicants and may be overly optimistic. The officials told us that these two programs were selected for the ratio calculation because the public works program is the agency's largest and the revolving loan fund program has been the most successful.
- TVA calculates its 3-to-1 ratio using 1995 data from one of the agency's five nonpower programs: the economic development program, which represents about 15 percent of TVA's nonpower funding. The remainder of

TVA's nonpower appropriations, which support the development of tourism, infrastructure maintenance, environmental research, and waste management, are not captured in the ratio. The ratio compares the total planned funding for a project with TVA's funding. According to agency officials, TVA regards its ratio as a goal that it met about 72 percent of the time for the projects initiated in the economic development program in fiscal year 1995.

Scope and Methodology

To identify studies of the impact of the agencies' programs on economic development, we conducted searches of the literature; requested that the agencies provide any internal or external studies or other documentation; and contacted over two dozen economic development professionals and researchers, including experts affiliated with national associations and with universities in the regions served by ARC and TVA. We reviewed more than 120 studies and reports identified through that search. We excluded those that (1) were limited to descriptive information on a program or its implementation or (2) covered the period before 1980 and were very narrow in scope. The remaining 22 studies, on which we focused our work, were econometric studies or other studies that described the impact of an agency's programs or projects. These studies included two comprehensive, agencywide analyses. We discussed selected studies with agency officials and researchers to clarify our understanding of the studies' results and limitations.

To determine how the three agencies calculated their performance ratios, we asked the agencies to provide a description of their performance ratio, including the specific data used in the calculation. We reviewed the documentation and discussed the ratios and calculations with agency officials. We also examined references to performance ratios in the studies that we reviewed. We conducted our work from November 1995 through March 1996 in accordance with generally accepted government auditing standards.

Agency Comments

We provided copies of a draft of this report to ARC, the Department of Commerce, and TVA for their review and comment. Their comments and our response to them appear in appendixes V, VI, and VII. In agreeing that no studies established a strong causal linkage between a positive effect and an agency's economic development assistance, all three agencies said that establishing such a linkage would be extremely difficult and expressed doubt that such studies had been conducted for other federal agencies' programs. Specifically, ARC said that "it is impossible—not just difficult—to establish such linkages for any specific federal investment." The Department of Commerce stated that "there are few, if any, Federal agencies whose programs could meet the criteria established for a metropolitan econometric model." TVA commented that "historically, it has been difficult to assess the real impact of various government programs using econometric models, and TVA does not uniquely lag in this kind of data." We agree, and we point out in our results-in-brief section that it is not surprising that we found limited research because a persuasive study of the impact of economic development assistance programs would have to document an improvement, link it to an agency's programs, and rule out alternative causes. In addition, the Department of Commerce and TVA pointed out that performance ratios are but one of many performance measures used by the agencies, and we revised the report to reflect this comment.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 14 days from the date of this letter. At that time we will send copies to the appropriate congressional committees, the Secretary of Commerce, the Administrator of TVA, the Commissioner of ARC, and the Director of the Office of Management and Budget. We will also make copies available to others on request.

If you would like additional information on this report, please call me at (202) 512-7631. Major contributors to the report are listed in appendix VIII, and a list of related GAO products appears at the end of the report.

Judy England-Joseph

Judy A. England-Joseph
Director, Housing and Community
Development Issues

Contents

Abbreviations

ARC	Appalachian Regional Commission
EDA	Economic Development Administration
GAO	General Accounting Office
TVA	Tennessee Valley Authority

Overview of the Appalachian Regional Commission and Its Economic Development Programs

The Congress established the Appalachian Regional Commission (ARC) in 1965 because it found that the region lacked the economic base vital for vigorous, self-sustaining growth. The designated region includes almost 400 counties spread over 13 states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia.

The Commission's organization includes a federal cochairman, appointed by the President and confirmed by the Senate, who has one half of the votes on the Commission, and the 13 governors, who have the other half of the votes. Projects originate at the local level and are submitted to the Commission through the 69 local development districts that ARC supports. No policy can be set or money spent unless the federal representative and a majority of the governors reach agreement.

ARC's programs are typically divided into two broad categories: highway and nonhighway. The highway program is designed to improve accessibility to the region, reduce highway transportation costs to and within Appalachia, and provide highway transportation facilities to accelerate the region's overall development. The goal of the program is to complete a 3,025-mile corridor highway system.

The nonhighway programs address area development, local development support, and technical assistance. The area development program includes three types of activities: physical development, such as basic infrastructure and housing; human development, such as education, child care, and health care; and business development, such as strategic planning, tourism, and small business development.

ARC's appropriation for fiscal year 1995 was $282 million.

Overview of the Economic Development Administration and Its Programs

The goal of the Economic Development Administration's (EDA) programs is to alleviate the conditions of substantial and persistent unemployment and underemployment in economically distressed areas and regions. The agency, established in 1965, has nine programs designed to meets its objectives: planning, local technical assistance, national technical assistance, the university center program, economic adjustment, economic adjustment-revolving loan fund, public works, research and evaluation, and trade adjustment assistance.

Planning grants support the design and implementation of economic development programs and policies by local organizations. Local technical assistance grants are designed to assist in solving specific economic development problems, respond to developmental opportunities, and build and expand local organizational capacity in distressed areas. National technical assistance grants provide resources (1) to intermediary organizations that give technical assistance to local, district, and state economic development organizations and (2) for national demonstrations of innovative economic development techniques. University center grants and cooperative agreements help colleges and universities use their own and other resources to address the economic development problems and opportunities of their service areas.

Economic adjustment grants help areas develop and/or implement strategies to address structural economic problems resulting from sudden and severe economic dislocation, natural disasters, and spending reductions related to defense or military base closures. In addition, revolving loan fund grants are provided to establish or expand revolving loans funds in depressed areas in order to encourage greater private-sector participation in economic development activities.

Public works grants are provided to help distressed communities attract new industry, encourage business expansion, diversify economies, and generate long-term private-sector jobs. The trade adjustment assistance program funds a network of Trade Adjustment Assistance Centers that aid firms and industries in applying for benefits under chapter 3 of title II of the Trade Act of 1974.

EDA's appropriation for fiscal year 1995 was $410 million.

Overview of the Tennessee Valley Authority and Its Programs Addressing Economic Development

The Tennessee Valley Authority (TVA) was created in 1933 as a government-owned corporation to control flooding, improve navigation, replenish the soil, promote improved agricultural practices, and produce electric power for the Tennessee Valley region. This region comprises seven states, including most of Tennessee and parts of Alabama, Georgia, Kentucky, Mississippi, North Carolina, and Virginia. TVA manages two program areas: a power system designed to be self-supporting and a set of five nonpower programs supported by congressional appropriations.

Through its nonpower programs, TVA supports an environmental research center, an economic development program, a recreation and environmental education area, and land and water management programs. The environmental research center conducts research in air quality, waste treatment, and watershed protection, and supports demonstration sites on ways to prevent surface and groundwater contamination. The economic development program supports strategic and quality planning, business infrastructure development, workforce development, electronic access to a variety of information sources, demographic and economic databases, networks, forecasts and models, industrial site design and planning, and project assessment.

TVA's Land Between the Lakes program provides a 170,000-acre outdoor recreation and environmental education facility for the public. The land management program supports the development of a shoreline development and protection strategy, manages 160 public recreation areas, and supports environmental conservation. The water management program manages 50 dams on the Tennessee River and its tributaries, controls flooding along the river, manages the navigation system, supports the development of aeration technologies, and monitors the river's water quality.

TVA's appropriation for fiscal year 1995 was $136 million.

Studies on the Three Agencies' Economic Development Programs

We reviewed numerous studies, management reports, and other documentation about ARC, EDA, and TVA to identify studies that provided significant information on the performance of either one of the agencies as a whole or its specific programs. We found several such studies for ARC and EDA. We did not find any studies that provided significant information on the performance of either the nonpower portion of TVA as a whole or its specific nonpower programs.

Studies on the Appalachian Regional Commission

The studies listed below provide significant information on the performance of either ARC as a whole or its specific programs.

Agunbiade, Ajiboye O. An Analysis of Regional Development Policy and Economic Growth in Appalachia 1960-1975, The University of Iowa, Vol. 42/05-A of Dissertation Abstracts International, p. 2294, 1981.

Broder, Josef M., et al. "Quasi-Experimental Designs for Measuring Impacts of Developmental Highways in Rural Areas." Southern Journal of Agricultural Economics (July 1992), pp. 199-207.

Couto, Richard A. An American Challenge: A Report on Economic Trends and Social Issues in Appalachia. Commission on Religion in Appalachia. (Dubuque: Kendall/Hunt Publishing Co., 1994.)

Hale, Carl W., and Joe Walters. "Appalachian Regional Development and the Distribution of Highway Benefits." Growth and Change (Jan. 1974), pp. 3-11.

Isserman, Andrew and Terance Rephann. "The Economic Effects of the Appalachian Regional Commission: An Empirical Assessment of 26 Years of Regional Development Planning." Journal of the American Planning Association, Vol. 61, No. 3 (Summer 1995), pp. 345-64.

MDS Associates. Status of Appalachian Regional Commission Primary Care Projects, Laurel, Maryland, May 7, 1991.

Moore, Tyrel G. "Core-Periphery Models, Regional Planning Theory, and Appalachian Development." The Professional Geographer, Vol. 46, No. 3 (Aug. 1994), pp. 316-331.

Quadel Consulting Corporation. An Evaluation of the Appalachian Regional Commission 207 Housing Program - Final Report, Bethesda, Maryland, undated.

Rephann, Terance, and Andrew Isserman. "New Highways as Economic Development Tools: An Evaluation Using Quasi-Experimental Matching Methods." Regional Science and Urban Economics, Vol. 24 (1994), pp. 723-51.

State Research Associates. Enterprise Development in Appalachia: An Evaluation, Lexington, Kentucky, May 1982.

Swearingen, Christine, et al. Primary Health Care in Appalachia, Abt Associates, Cambridge, Massachusetts, Jan. 16, 1980.

Szczerbacki, David. Implementation of Economic Development Policy within a Three County Development District—An Assessment, State University of New York at Buffalo, Doctorate of Philosophy dissertation, Apr. 1984.

Widner, Ralph R. "Appalachian Development After 25 Years: An Assessment." Economic Development Quarterly, Vol. 4, No. 4 (Nov. 1990), pp. 291-312.

Studies on the Economic Development Administration

The studies listed below provide information on the performance of either EDA as a whole or its specific programs.

Aguirre International. EDA's Post-Disaster Assistance Program After Hurricane Andrew: An Interim Assessment, Rosslyn, Virginia, Nov. 1995.

Barrows, Richard L. and Daniel W. Bromley. "Employment Impacts of the Economic Development Administration's Public Works Program." American Journal of Agricultural Economics, Vol. 57, No. 1 (Feb. 1975), pp. 46-54.

C. Taylor & Associates. Final Report—A Status Assessment of the Public Works Demonstration Projects for Women Business Enterprise, Washington, D.C., Apr. 12, 1982.

Funk, Sherman M. Audit of EDA's Emergency Jobs Act Program, A-500-5-037, The Inspector General, United States Department of Commerce, Washington, D.C., Sept. 30, 1985.

Kwass, Peter and Beth Siegel. Factors Influencing the Performance of U.S. Economic Development Administration Sponsored Revolving Loan Funds, Mt. Auburn Associates, Somerville, Massachusetts, Vol. I, Aug. 1987.

________. Evaluation of the U.S. Economic Development Administration's Public Works Program: Analysis and Findings, Mt. Auburn Associates, Somerville, Massachusetts, Mar. 1992.

Martin, Randolph C. and Robert E. Graham, Jr. "The Impact of Economic Development Administration Programs: Some Empirical Evidence." The Review of Economics and Statistics (1980), pp. 52-62.

Rice Center, Evaluation of Selected University Centers, Houston, Texas, May 1989.

Siegel, Beth and Mona R. Hochberg. Evaluation of the U.S. Economic Development Administration's Local Technical Assistance Program, Mt. Auburn Associates, Somerville, Massachusetts, Vol. I, Apr. 1989.

Studies on the Tennessee Valley Authority

We collected and reviewed numerous studies, management reports, and other documentation about the Tennessee Valley Authority and its nonpower programs. However, we did not find any studies that provided information on the performance of either the nonpower portion of TVA as a whole or its specific nonpower programs.

Comments From the Appalachian Regional Commission

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

APPALACHIAN REGIONAL COMMISSION
A Proud Past, A New Vision

ARC

Office of the Federal Co-Chairman

March 20, 1996

Ms. Judy A. England-Joseph
Director, Housing and Community Development Issues
U.S. General Accounting Office
Washington, D.C. 20543

Dear Ms. England-Joseph:

I am writing in response to the draft GAO report entitled Limited Information Exists on the Impact of Assistance Provided by Three Agencies (GAO/RCED-96-103). While we believe the GAO staff have understood the unique ARC model and how its program functions, we find three basic problems in the draft report:

See comment 1.

First, the report seeks studies that demonstrate "strong causal linkages" between particular federal programs and macro economic performance. As far as we can determine, it is impossible--not just difficult--to establish such linkages for any specific federal investment. It is widely understood that in social science research--that is, research outside of a laboratory--causality cannot be determined. (Statistical association, as opposed to causality, can be demonstrated, as will be discussed vis a vis the Isserman study.) Consequently, GAO is setting up a standard that is impossible for ARC or any other federal, non-profit or private sector program to meet.

See comment 2.

See comment 3.

So far as we know, of the 342 federal programs referenced in the report, not a single one, including programs that annually invest more than ARC has spent over its entire 30 year history, has ever attempted such a study. In fairness, the report should prominently note this fact. Moreover, the original letter to ARC indicated that the purpose of the study was to examine "program effectiveness"--a concept that is far less sweeping than establishing the kind of causal linkages the draft report insists upon. A variety of ARC studies, in fact, address program effectiveness.

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Alabama Georgia Kentucky Maryland Mississippi New York North Carolina Ohio Pennsylvania South Carolina Tennessee Virginia West Virginia

See comment 4.

Second, the NSF-funded "twin counties" study (Isserman, 1995) comes as close as it is reasonable to expect in establishing the ARC contribution to regional economic growth. While not establishing causality, it does establish strong statistical association between ARC investments and growth. It does, moreover, show that the faster growth of the Appalachian counties did not result primarily from any one variable, including being a coal producing county or growth in the southern counties in the region. Saying that only a "weak linkage" is established is a form of rhetoric, and implies that control group studies are weak compared with other methods, such as a laboratory experiment. If "weak" refers to internal evidence, it is probably the wrong word. The study has done everything possible in a control group study to rule out alternative causes. That is the most that current methodology can ever do.

See comment 5.

In addition, the draft report fails to take note of the Moore study (1994) on core-periphery models. While the focus of the study is primarily the effectiveness of a particular model in assessing regional growth, it does suggest a particularly strong statistical relationship between the construction of highways--a major activity of ARC--and economic growth in Northern and Southern Appalachia.

See comment 6.

Finally, the report fails to recognize the distinction between "economic development" and "economic growth." Economic growth deals with increases in economic activity in the short run, while economic development measures the creation of long-term capacity for self-sustaining growth. ARC's programs are expressly designed to address long-term economic development, the impact of which is really impossible to measure. How, for example, can one isolate the long-term economic impact of having built 700 vocational/technical centers, or 300 health clinics, or 2000 water and sewer systems?

As you make your revisions in the report, I hope you will consider addressing these issues. We appreciate the cooperation that your staff has shown us, and we look forward to continuing to work with you as you craft the final document.

Sincerely,

Jesse L. White, Jr.
Federal Co-Chairman

The following are GAO's comments on the Appalachian Regional Commission's letter dated March 20, 1996.

GAO's Comments

1. The report acknowledges that successfully completing studies that demonstrate the impact of the three agencies' economic development programs would be difficult. However, we were asked to review studies that evaluate the impact on economic development of the ARC, EDA, and TVA nonpower programs. To respond to this question, it was necessary to look for studies that established a causal linkage between a positive economic effect and an agency's economic development assistance. Our use of the term "causal linkage" refers to the statistical associations one might expect to find through social science research. For example, in the Isserman and Rephann study, variables related to ARC's programs, such as the designation of a county as a "growth center," were used to predict which counties would have higher growth rates. The data were examined to see if the measured growth would be associated with specific program features. In the study, these program-specific variables were found to have small and sometimes negative impacts on growth. Our confidence that the measured differences in growth can be attributed to ARC is thus limited.

2. While we concur that little is known about the impact that federal programs have on rural economic development, we did not examine studies on all 342 programs concerning economic development cited in the December 1994 Catalog of Federal Domestic Assistance. As the report states, the scope of our review was the three agencies' programs.

3. Our original letter to ARC stated that the purpose of our review was to obtain studies on the effectiveness of the agencies' economic development programs. During the course of our work, we examined numerous studies, many of which addressed the effectiveness of programs through case studies involving a review of particular locations or projects. However, we chose to limit our review to studies that were comprehensive in scope. In general, case-study research has the advantage of documenting a project's implementation and detailing for policymakers the various problems and successes that each project experienced. However, various limitations to the case-study approach restrict researchers' ability to generalize about effectiveness. Generalizations on effectiveness are possible through analytical methods such as econometric modeling; that is why we focused our report on econometric studies.

4. The Isserman and Rephann study does not establish a strong statistical association between ARC's investments and growth. The study only examines differences in growth between ARC-aided and non-ARC-aided counties; it does not include any variables that capture ARC's investments at the county level. It does establish that ARC counties grew faster than similar non-ARC-aided counties, but does not correlate those differences in growth with ARC's expenditures. The study also provides evidence that some of the measured differences in growth may be associated with coal production. In table 6 of the study, coal-producing counties are shown to have significantly higher growth rates in income and per capita income. In table 5, coal-producing counties are shown to have increased their per capita income by 38 percent more than similar non-ARC counties, while non-coal-producing counties grew only 5 percent more in per capita income. It was our intent only to note that while the study finds large differences between ARC and non-ARC counties in many dimensions, it does not allow for linking those differences to ARC's activities, nor does it measure the extent to which those differences are due to external influences such as coal prices.

5. While we included the Moore study in appendix IV, we did not discuss its findings in the text because they applied to highway programs in general, not specifically to those of ARC.

6. We believe that the studies cited in our report do address long-term issues. The Martin and Graham study discusses increases in income both during and after the period of EDA's expenditures. The Isserman and Rephann study examines increases in factors such as per capita income and population over 22 years.

Comments From the Economic Development Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

MAR 18 1996

Ms. Judy A. England-Joseph
Director
Housing and Community
Development Issues
U.S. General Accounting Office
Washington, D.C. 20548

Dear Ms. England-Joseph:

Thank you for your letter requesting the Department's comments on the draft General Accounting Office report entitled "Limited Information Exists on the Impact of Assistance Provided by Three Agencies."

As the report points out, there is no single source of data to determine the impact on economic development assistance provided by the Economic Development Administration. However, we would like to offer the enclosed comments for your consideration.

We appreciate your interest in the Department and its programs.

Sincerely,

Ronald H. Brown

Enclosure

EDA COMMENTS
TO GAO REPORT ON STUDIES OF THE IMPACT OF EDA INVESTMENTS

See comment 1.

Since the enactment of the Public Works and Economic Development Act of 1965, and the subsequent creation of the Economic Development Administration (EDA), numerous external evaluations (approximately 50) have been conducted of the programs, operational processes of EDA and, in some instances, the categories of entities receiving EDA assistance. These evaluations were conducted for the purposes of determining the outcomes of the various types of projects comprising all of the EDA programs, and the effectiveness of operational procedures and delivery mechanisms, as a means of determining project/program effectiveness and as a management tool for subsequent program operations. The earliest of these program evaluations dates back to 1966 and the latest is currently underway.

Each of the program evaluations have concluded that a substantial number of projects included in the study were successful in terms of their job impact; in those instances indicating otherwise, modifications to the program, or project type, were made accordingly, for ongoing program operations. In some instances the studies contained recommendations concerning improvements in processes and operational procedures, which were subsequently acted upon.

See comment 2.

However, recognizing the complexity of conducting major, broad-based "IMPACT" analysis studies, assessing proper attribution to the EDA investment (which is comparatively small, in relation to the overall local economy, and nonrecurring on an ordered or cyclical basis), the general lack of resources to support the enormous costs associated with such studies, EDA has focused its efforts upon conducting periodic evaluations of the "OUTCOMES" of various types of projects comprising all of the EDA programs. There are few, if any, Federal agencies whose programs could meet the criteria established for a metropolitan econometric model. Therefore, it would seem reasonable to include in the GAO summary findings: "GAO was not able to identify any Federal economic development program that has proven such cause or linkage."

See comment 3.

It is the results of many of these evaluations that have formed the basis for projecting the outcomes of various types of projects and collectively enumerating the results of the EDA programs. Data specifically depicting the leverage impact of EDA investments, has been conservatively stated, and is based upon two external evaluations of separate EDA programs over a period of time.

-2-

In response to the requirements of the Government Performance & Results Act (GPRA), EDA has undertaken a commitment to develop a program performance measurement system. Under the GPRA, EDA is required to prepare an annual performance plan for each program activity beginning with Fiscal Year 1999. The annual performance plan will derive from annual strategic plans for program activities that, under the GPRA, are required to be submitted to Office of Management and Budget beginning September 30, 1997. Annual reports on actual performance achieved compared to goals expressed in the performance plan are required to be submitted under the GPRA beginning March 31, 2000.

EDA is developing core performance measures for its programs, as well as a process for gathering and analyzing performance data, during Fiscal Year 1996. EDA proposes to apply the performance measurement system to its programs prospectively beginning in Fiscal Year 1997. EDA also proposes to collect and analyze past performance data on its defense program during Fiscal Year 1997.

Now on p. 6.
Now appendix II, p. 13.
See comment 4.

A typographical correction on page 9, the second paragraph, line 10 says "two of its eight programs," but should read "two of its nine programs." Appendix III, page 23, missed the "research and evaluation" program in its listing of EDA programs. The total should be "nine," not eight.

The following are GAO's comments on the Economic Development Administration's letter dated March 18, 1996.

GAO's Comments

1. During the course of our work, we examined many of these evaluations. In general, the evaluations addressed the effectiveness of programs through case studies involving a review of particular programs, locations, or projects. However, we chose to limit our review to studies that were comprehensive in scope. In general, case-study research has the advantage of documenting a project's implementation and detailing for policymakers the various problems and successes that each project experienced. However, various limitations to the case-study approach restrict researchers' ability to generalize about effectiveness. Generalizations on effectiveness are possible through analytical methods such as econometric modeling; that is why we focused our report on econometric studies.

2. The report focuses on studies of the ARC, EDA, and TVA nonpower programs because of the requesters' interest. While we concur that little is known about the impact that federal programs have on rural economic development, a thorough search of studies on all federal economic development programs was beyond the scope of our review.

3. The report describes EDA's approach which includes reducing by 50 percent the ratios calculated from data received from grant applicants. The report also explains that the ratio covers two EDA programs.

4. We made this correction.

Comments From the Tennessee Valley Authority

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

TVA

Tennessee Valley Authority, One Massachusetts Avenue, Northwest, Washington, DC 20444-0001

Ronald A. Loving
Vice President, Government Relations

March 22, 1996

Ms. Judy A. England-Joseph
Director, Housing and
Community Development Issues
U.S. General Accounting Office
Washington, DC 20548

Dear Ms. England-Joseph:

Thank you for the opportunity to respond to the GAO draft report entitled Limited Information Exists on the Impact of Assistance Provided by Three Agencies.

TVA recognizes the difficulty involved in finding statistical data with strong causal linkages between the agencies under review and specific respective economic impacts. It is important to note that historically, it has been difficult to assess the real impact of various government programs using econometric models, and TVA does not uniquely lag in this kind of data. While the GAO report is inconclusive due to lack of available information, we would like to address some key issues surrounding TVA's non-power, appropriated programs.

See comment 1.

Early in the review, TVA raised concerns about the grouping of all non-power programs into the category "economic development." Actually, TVA's appropriated programs are divided into two major categories: *Resource Group* and *Economic Development.* Separate from the appropriated programs is TVA's electric power system, which is self-supporting and not subsidized by the federal government. Through 160 local power companies, TVA supplies electricity to Americans across a seven-state region. TVA is the largest electric power producer in the nation, and among the most cost efficient.

Ms. England-Joseph
Page 2
March 22, 1996

TVA's Non-Power Programs

The *Economic Development* arm of TVA develops initiatives that support national industrial competitiveness and helps to develop high-quality jobs in areas with per-capita income significantly below the national average. Also, TVA deploys an information infrastructure that supports industrial development and the generation of commerce. The program focuses on three strategic initiatives: business development, community development, and technical services.

Now on pp. 6-7
See comment 2.

On pages 9-10, GAO only analyzed the 3:1 performance ratios for Economic Development. This 3:1 ratio is only one evaluation criteria used by Economic Development. The emphasis on leveraging formulas, while important, does not fully address programmatic impacts. TVA seeks out projects with a 3:1 or better leveraging ratio because this make good business sense.

See comment 3.

The *Resource Group* carries out functions of the appropriated programs that are largely mandated functions of government, established for public safety and protection. TVA has identified its essential appropriated services as those mandated by federal and state laws those that must be implemented to ensure the safety of the public.

The Resource Group manages all TVA land and water stewardship functions which include managing the fifth-largest river in the United States with flood control along 54 dams and navigation at 14 locks. TVA has direct responsibilities for:

- 641,000 surface acres of water
- 11,000 miles of shoreline
- 420,000 acres of public land
- 1,000 miles of navigable waterways
- 426 miles of trails
- 564 miles of roads
- 100 public recreation areas

The nation earns an annual rate of return of 12 percent on its investment in TVA dams and reservoirs to promote waterway commerce, control floods, produce electricity, and provide outdoor recreation opportunities.

Ms. England-Joseph
Page 3
March 22, 1996

Also under the non-power programs is funding for the problem solving and business research at the Environmental Research Center in Muscle Shoals, Alabama. The Center is on a path toward self-sufficiency and by FY 1998 will have attained close to 70% of its funding from outside sources.

See comment 4.

The GAO report implies by its title that TVA's programs are "assistance" programs. In fact, the majority of TVA's appropriated programs are far more than regional assistance programs--funding for stewardship, navigation and flood control are largely mandated, essential functions of the federal government.

Now appendix III.
See comment 5.

In the Appendix IV overview of TVA, GAO references funding levels for FY 95, but does not address the fact that TVA took a substantial cut in funding for FY 96 and was funded at $109 million.

In conclusion, I hope the points raised in these comments will enable you to clarify TVA's responsibilities, and the vital functions it carries out with appropriated funding. If you have any additional questions, please do not hesitate to call on me or my staff.

Sincerely,

Ronald A. Loving

The following are GAO's comments on the Tennessee Valley Authority's letter dated March 22, 1996.

GAO's Comments

1. We recognize that TVA only considers a portion of its nonpower programs as "economic development." However, TVA's other nonpower programs also have strong elements of economic development in that they support activities such as land and water management, infrastructure maintenance, and tourism. For example, TVA's Land Between the Lakes program provides a 170,000-acre outdoor recreation and environmental education facility for the public that contributes to the economic viability of the region.

2. In the section of the report that TVA cites, we focus on performance ratios—which the agencies define in terms of a leveraging formula—because of the interest of the requesters. However, in a preceding section, we discuss studies that evaluate the programs' impact that would include other evaluation criteria, such as income growth. As our report notes, we found no studies that examined the impact of TVA's nonpower programs—including the program that TVA characterizes as economic development.

3. Appendix III provides an overview of TVA and its nonpower activities.

4. As used in the report title, "assistance" refers to the extent of federal funding. As we noted in comment 1, TVA's appropriated programs contribute to the economic viability of the region and, hence, are related to economic development. The fact that they may be mandated or regarded as essential does not change their value to the economic development of the region. Indeed, they would have regional economic impact similar to that of ARC's highway program or EDA's public works program.

5. We focus on fiscal year 1995 funding in the report in order to have comparable data across the agencies because at the time of our review, the Economic Development Administration had not yet been funded for fiscal year 1996.

Major Contributors to This Report

Susan Beekman
Erin Bozik
Patricia Farrell Donahue
Austin Kelly

Related GAO Products

Tennessee Valley Authority: Financial Problems Raise Questions About Long-Term Viability (GAO/AIMD/RCED-95-134, Aug. 17, 1995).

Economic Development Programs (GAO/RCED-95-251R, July 28, 1995).

Rural Development: Patchwork of Federal Water and Sewer Programs Is Difficult to Use (GAO/RCED-95-160BR, Apr. 13, 1995).

Community Development: Comprehensive Approaches Address Multiple Needs but Are Challenging to Implement (GAO/RCED/HEHS-95-69, Feb. 8, 1995).

Rural Development: Patchwork of Federal Programs Needs to Be Reappraised (GAO/RCED-94-165, July 28, 1995).

Rural Development: Federal Programs That Focus on Rural America and Its Economic Development (GAO/RCED-89-56BR, Jan. 19, 1989).

Federal Economic Development Assistance Programs: An Econometric Analysis of Their Employment Effects (GAO/OCE-84-5, Aug. 15, 1984).

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