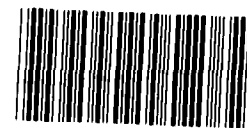# BY THE US GENERAL ACCOUNTING OFFICE

Report To The Chairman, Subcommittee On Economic Development, Committee On Public Works And Transportation House Of Representatives

Estimated Employment Effects Of Federal Economic Development Programs

Using an econometric model, GAO estimated the effects on employment of an additional $500,000 in federal economic development assistance The model's estimates are based on the 1974-78 period and cannot be used to make forecasts because of changes in the economic environment since that time However, GAO found that (1) most of the additional jobs occurred in manufacturing, (2) public works grants were the most cost-effective type of grant in creating jobs, and (3) grants had their largest employment effect in states with relatively low employment

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GAO/OCE-84-4
AUGUST 15, 1984

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

B-211086

The Honorable James L. Oberstar
Chairman, Subcommittee on Economic
  Development
Committee on Public Works and
  Transportation
House of Representatives

Dear Mr. Chairman:

In your January 26, 1982, letter (see app. XI) you asked us to develop a common methodology for evaluating the effects of federal economic development programs on job creation as well as the increase in tax revenues at the local, state, or federal levels resulting from these programs. You also asked that we specifically compare the effectiveness of public works grant programs with other economic development grant programs, such as community development block grants and grants for business development. After discussion with your staff, we agreed that we could not address the issue of tax revenues at this time.

We developed an econometric model to provide consistent estimates of the employment effects of all the federal economic development programs that we surveyed.[1] The estimates from this model suggest that these programs did create jobs between the mid- and late 1970's. Our results also show evidence that:

--Most jobs were created in the manufacturing sector of the economy, regardless of the method (grant, direct loan, or loan guarantee) used to provide assistance.

--Among the various grant categories, public works grants were the most effective in creating jobs.

--Grants were most effective in creating jobs in states with low employment growth.

The results of our study are derived from analyzing the 1974-78 period and cannot be used to make precise forecasts of future effects. Such forecasts would implicitly assume (probably

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[1]This approach is based on earlier research, both in Great Britain and the United States, using econometric models to estimate the effects of national programs. See, for example, National Bureau of Economic Research, "An Analysis of Federal Economic Development Programs," 1976.

incorrectly) that the behavioral and structural relationships quantitatively estimated with 1974-78 data will not change. Furthermore, we cannot say what would have happened if these programs had not existed. From a societal viewpoint, the resources would have been freed for other public or private sector uses which could have had some effect on employment. Limitations of this kind are characteristic of all empirical analysis of economic relationships. Nevertheless, the work carried out does provide a general guide to the relative effectiveness of programs of this type. In doing so, it advances our knowledge and enhances the policymaker's ability to consider alternatives in a rational decisionmaking framework.

OUR APPROACH

We found that federal agencies that administer economic development programs generally use a case study approach to measure program effectiveness. This approach involves a subjective job-counting process. Results vary from one agency or program to the next, depending on each agency's definition of a new job, and the approach fails to sort out job creation associated with federal investment from that caused by changes in general economic conditions. Our approach is broader, taking into account the interaction between these programs and other economic factors, and also produces results that are comparable across program categories.

Instead of using the case study approach, we developed an econometric model to evaluate the effect on states of federal economic development programs. An econometric model can enable one to isolate the separate effects of a large number of factors. The econometric model permitted us to sort out the influence of federal economic development programs from other influences on employment growth.

We collected disbursement and obligation data on 56 economic development programs[2] (see app. I) from eight federal agencies for the period 1969 through 1978. Total federal obligations for these programs for the 10-year period were $61 billion (in 1972

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[2]The definition of economic development programs varies. Our set of programs encompasses more programs than classified in the federal budget as "community and regional development programs." We included all the major programs contained in that category of the federal budget except one, Disaster Relief. In terms of funding, 96 percent of community and regional development grant outlays were included in our study. We also included programs that operate from an off-budget status. (See Special Analyses: Budget of the United States Government, Fiscal Year 1979, p. 193.)

constant dollars). These economic development programs provide
economic assistance through grants, loans, or loan guarantees.
With the exception of Rural Electrification Administration pro-
grams, we limited our data to those economic development programs
with legislative objectives that include creating jobs.[3] We
gathered employment, income, and other economic and demographic
data from the Department of Commerce; Data Resources, Inc.; and
other sources for the 1974-78 period, the year for which the most
recent complete set of data was available.[4] All data were
collected for the 50 states and the District of Columbia.

After collecting the data, we then constructed a simple
supply and demand model for labor.[5] The supply of labor is
assumed to be related to wages, general economic growth, and
various socioeconomic factors. The demand for labor is assumed
to be related to these same types of factors as well as federal
expenditures for economic development and other federal expend-
itures. The demand equation estimates the average change in
employment associated with increases in federal economic
development assistance programs. The result we sought was an
estimate of the number of additional jobs created in each
industry for the average state in the average year between 1974
and 1978.

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[3]Of course, most of these programs have several objectives. We
have not attempted to evaluate these programs on objectives
other than employment creation. The total effectiveness of a
program depends on how well it meets all of its objectives, but
that type of evaluation is beyond the scope of this present
study. For this study, effectiveness refers only to job
creation.

[4]We collected agency data for years prior to the study period,
1974 to 1978, to create distributed lags for these variables.
The commonly accepted belief is that the full effect of federal
assistance takes more than a year to be realized. Thus, for
example, the effect on employment in 1974 is a combination of
grants distributed in 1974 and earlier years. Variables
created in this manner are known as distributed lag variables.

[5]Appendix II provides a brief description of our model. The
model was initially reviewed by regional modelers in both
academia and the government, all experts in the field, and was
expanded to its current form by including additional variables
and further refinements suggested by these reviewers. A com-
plete technical description of the model and empirical results
has been prepared as a GAO staff study to this report. (See
Federal Economic Development Assistance Programs: An Econometric
Analysis of Their Employment Effects, 1974-78 (GAO/OCE-84-5).)

Limits of our model

An econometric model can overcome some of the shortcomings of the case study approach, but the model also has limitations. First, as previously stated, the model we developed is not designed to make forecasts. It explains the economic effects (in terms of jobs) of a particular set of programs given the economic conditions during the 1974-78 period. The results could be different under a different set of economic conditions. Second, the model's estimates do not make a distinction between direct and indirect jobs. Instead, the estimates associate total (both direct and indirect) change in state employment with a number of factors, including federal economic development assistance. Third, many of these programs have several objectives, but the model only considers the job-creation aspect. Fourth, we cannot say what would have happened if these federal programs had not existed. Presumably, the resources would have been used elsewhere within the government or freed for private sector use. Neither the case study nor this type of econometric model can deal adequately with the substitution question of how effective the freed-up resources would have been. On the other hand, an econometric model can deal with substitution when the question is how many new jobs did the assistance create as opposed to other factors, such as changes in the business cycle. Fifth, because the model estimates the effect of these programs on the average state for the average year during the 1974-78 period, we have not attempted to estimate the specific effect of the programs on a specific state. Last, while the model considers lagged effects, it does not attempt to answer questions about the appropriate timing of expenditures. These questions usually arise during discussions concerning countercyclical federal aid.

OUR RESULTS

Based on estimates from our model, it appears that federal economic development assistance did create jobs during the 1974-78 period. The model suggests that the number of jobs created varied by industrial classification and by the state's overall level of employment growth (high, medium, and low). For example, if the average state received an additional $500,000 in economic development grants in the average year over the 1974-78 period, estimated employment growth would vary by industry, as shown in table 1. The table shows the estimated number of additional jobs associated with an additional $500,000 grant after accounting for the historical levels of economic activity by government and by private industry. A $500,000 increase in economic development grants would initially be associated with 216 additional jobs at an estimated cost of $2,315 per job per

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year.[6] The model suggests that in the long run, the number of
new jobs would be reduced to 171, at an estimated cost of $2,924
per job per year.[7] Tables 2 and 3 show the results for loan
guarantees and direct loans, respectively. Again, the long-run
response is less than the initial response, as the labor market
adjusts.

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[6]Amount of assistance per job is based on disbursements of
federal funds. Matching funds from state or local governments
or from private sources are not included.

[7]It is possible that many of the short-run jobs are temporary
and have no lasting effect on employment, but economic theory
also predicts that increases in economic development aid result
in an initial increase in demand for workers. As demand for
workers increases, their wages are bid up due to a limited
supply. As wages are bid up, employers cut back on a now more
expensive factor of production. Thus, the long-run response is
lower than the initial response.

Table 1

Estimated Additional Jobs Associated With a $500,000 Increase in Economic Development Assistance Grants for the Average State in the Average Year Over the 1974-78 Period

Industry	Initial response	Long-run response
Household, retail, and wholesale trade	28	23
Manufacturing	139	110
Contract construction	8	-(a)
Banking, insurance, and real estate	10	9
Personal services	31	29
Total[b]	216	171
Amount of assistance per additional job	$2,315	$2,924

[a]The dash (-) indicates the estimate was not statistically different from zero.

[b]Estimates for other industries—agriculture, mining, transportation and utilities, business services, and administrative and auxiliary—were not statistically different from zero.

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Table 2

Estimated Additional Jobs Associated With a $500,000 Increase in Economic Development Assistance Loan Guarantees for the Average State in the Average Year Over the 1974-78 Period

Industry	Initial response	Long-run response
Household, retail, and wholesale trade	9	6
Manufacturing	37	-(a)
Contract construction	-5b	-5
Banking, insurance, and real estate	3	3
Personal services	13	10
Totalc	57	14
Amount of assistance per additional job	$8,772	$35,714

aThe dash (-) indicates the estimate was not statistically different from zero.

bThe negative figures suggest jobs are being shifted among industries.

cEstimates for other industries--agriculture, mining, transportation and utilities, business services, and administrative and auxiliary--were not statistically different from zero.

Table 3

Estimated Additional Jobs Associated With a $500,000 Increase in Economic Development Assistance Direct Loans for the Average State in the Average Year Over the 1974-78 Period

Industry	Initial response	Long-run response
Household, retail, and wholesale trade	5	-(a)
Manufacturing	19	-
Contract construction	-5[b]	-7
Banking, insurance, and real estate	-	-
Personal services	-	-
Total[c]	19	-7[d]
Amount of assistance per additional job	$26,316	

[a]The dash (-) indicates the estimates were not statistically different from zero.

[b]The negative figures suggest jobs are being shifted among industries.

[c]Estimates for other industries—agriculture, mining, transportation and utilities, business services, and administrative and auxiliary—were not statistically different from zero.

[d]The model did not indicate there would be any long-run job creation.

These results do not mean that grants were more cost-effective than loans and loan guarantees, such a conclusion overlooks the fact that the cost to the federal government for each type of assistance is different. The federal government bears the full cost of grants, while the cost of a loan or loan guarantee is not necessarily reflected in the amount of the loan. Computing this cost entails making estimates of default rates, the interest rate subsidy, and the opportunity cost of the funds. We have not estimated these costs here because that is beyond the scope of this review.

Tables 1 through 3 also depict how the estimated number of additional jobs varied by industry during the period.[8] For each type of assistance, initially over 50 percent of the additional jobs occurred in manufacturing. Personal services ranked second, and household, retail, and wholesale trade ranked third. In the long run, several industries showed no statistically significant job changes.

Several economic development programs funded projects that directly employed construction workers. However, the construction industry experienced low growth during the 1974-78 period, and construction projects financed by these programs tended to be capital- rather than labor-intensive. These reasons help to explain why federal economic development assistance appears to have been more effective in creating manufacturing than construction jobs.

Public works grants were more cost-effective than other grants

Although we cannot conclude from the estimates that grants were more cost-effective than other types of assistance, we can compare cost effectiveness among various types of grants. The estimates in table 4 indicate that public works grants were more cost-effective than other grants in creating jobs. An additional $500,000 public works grant to the average state in the average year during the 1974-78 period was associated with a long-run response of 241 new jobs relative to only 160 for other types of grants. The amount of assistance per additional job would have been $2,075 per year for public works grants compared with $3,125 per job per year for other types of grants.

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[8]See appendix III for a discussion of the industry classifications used in our analysis.

Table 4

Estimated Additional Jobs Associated With a $500,000 Increase in
Grant Disbursements for the Average State in the Average Year
Over the 1974-78 Period, by Type of Grant

Industry	Public Work Grants[a]		Other Grants[b]	
	Initial response	Long-run response	Initial response	Long-run response
Household, retail, and wholesale trade	33	30	18	19
Manufacturing	170	172	74	75
Contract construction	5	-([c])	17	19
Banking, insurance, and real estate	15	14	-	-
Personal services	25	25	47	47
Total[d]	248	241	156	160
Amount of assistance per additional job	$2,016	$2,075	$3,205	$3,125

[a]The public works programs in our analysis were primarily from the Economic Development Administration (EDA). (See app. I.)

[b]Includes community development, business development, and block grants, but does not include technical assistance, planning grants, and demonstration projects.

[c]The dash (-) indicates the estimates were not statistically different from zero.

[d]Estimates for other industries--agriculture, mining, transportation and utilities, business services, and administrative and auxiliary--were not statistically different from zero.

Grants were more stimulative in regions with low employment growth

The model's estimates are based on a number of assumptions. Because the estimates apply to the average state, an implicit assumption is that states respond to economic stimulus in the same manner. This assumption may be somewhat restrictive. To reduce the restrictiveness, we ran the model on groupings of states based on their employment growth characteristics.[9] In general, we found evidence that grants were more stimulative and more cost-effective in areas of low employment growth.

Table 5 presents the estimated additional jobs associated with a $500,000 increase in grants based on employment growth characteristics. A $500,000 increase in grants for the average state with below average employment growth was associated with a long-run response of 332 additional jobs, requiring $1,553 in assistance per job per year. For the average state in the high employment growth group, the estimates indicate that the long-run response was 140 additional jobs at a cost of $3,571 in assistance per job per year.

CONCLUSIONS

We used an econometric model, which provides a uniform evaluation method, to estimate employment effects for various types of federal economic development assistance programs. The results of this analysis, which produces estimates of the number of additional jobs associated with a $500,000 increase in assistance, and subject to the limitations previously discussed, support the following conclusions:

--Most jobs were created in the manufacturing sector of the economy, regardless of the method (grant, direct loan, or loan guarantee) used to provide assistance.

--Among the various grant categories, public works grants were the most cost-effective in creating jobs.

--Grants were most effective in creating jobs for states with relatively low employment growth.

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[9]In appendix IV we discuss the technique and list the states in each group.

Table 5

Estimated Additional Jobs Associated With a $500,000 Increase in
Grant Disbursements for the Average State in the Average
Year Over the 1974-78 Period, By Employment Growth Category

Industry	Low Employment Growth		Medium Employment Growth		High Employment Growth	
	Initial response	Long-run response	Initial response	Long-run response	Initial response	Long-run response
Household, retail, and wholesale trade	29	28	33	43	18	20
Manufacturing	278	206	124	133	109	110
Contract construction	15	14	15	13	-(a)	-
Banking, insurance, and real estate	19	15	9	9	10	10
Personal services	66	59	38	50	-	-
Total[b]	407	332	219	248	137	140
Amount of assistance per additional job	$1,229	$1,553	$2,283	$2,016	$3,650	$3,571

[a]The dash (-) indicates the estimates were not statistically different from zero.

[b]Estimates for other industries--agriculture, mining, transportation and utilities, business services, and administrative and auxiliary--were not statistically different from zero.

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AGENCY COMMENTS

The following agencies commented on a draft of this report: the Council of Economic Advisers; the Office of Management and Budget, the Departments of Housing and Urban Development, Commerce (EDA), Agriculture; and the Small Business Administration. Their comments along with our response appear in appendices V through X.

Our intent in this report was to present results of the model with a minimum amount of technical discussion. Complete documentation of all the technical details and the technical process involved in obtaining the results would have complicated the presentation unduly. However, the agencies would have preferred more technical description.
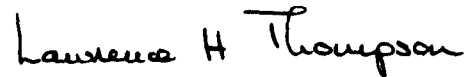
The agencies indicated that we did not provide enough technical detail for them to make an adequate evaluation of our methodology. We offered to answer technical questions and brief the reviewers if they so desired, but many of the agencies did not ask to be briefed. Another major concern revolved around making comparisons between our results and the results of previous research using the case study approach. Basically, the results are not comparable because the estimates represent different conceptual measures. A third concern focused on how policymakers might use the results of this model. We noted, in discussing the model's limitations, that the results only apply to the 1974-78 period and cannot be used to make forecasts of future effects of similar programs.

After we received the agency comments, we decided to give the agencies an opportunity to review our technical documentation. A technical paper was prepared. It included the specific details of how the model was developed along with the rationale for each variable and the coefficient estimates for each variable. Some, but not all, of the questions raised by the agencies in their comments on this report were answered by the technical paper. We are publishing the revised technical paper along with the agencies technical comments as a separate document.

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We would be happy to discuss our analysis further with you or your staff. The preliminary findings of this economic modeling endeavor were presented by Harry S. Havens, Assistant Comptroller General, when he testified before your Subcommittee on February 5, 1983. Copies of the report are being sent to the Chairman, Council of Economic Advisers; the Director, Office of Management and Budget; the Secretary, Department of Housing and Urban Development; and other interested parties.

Sincerely yours,

Lawrence H. Thompson
Chief Economist

C o n t e n t s

ABBREVIATIONS

ARC	Appalachian Regional Commission
BEA	Bureau of Economic Analysis
CSA	Community Service Administration
EDA	Economic Development Administration
FMHA	Farmers Home Administration
GAO	General Accounting Office
HUD	Department of Housing and Urban Development
IRBs	Industrial Revenue Bonds
OMB	Office of Management and Budget
OMBE	Office of Minority Business Enterprise
RPC	Regional Planning Commission
SBA	Small Business Administration
SIC	Standard Industrial Classifications

ECONOMIC DEVELOPMENT PROGRAMS

INCLUDED IN OUR ANALYSIS

Economic development aid is not readily defined by a specific set of federal programs because almost all federal spending has at least an indirect effect on local or regional economies. We found programs with an economic development purpose in the following departments, agencies, and commissions:

    Farmers Home Administration (FmHA)
    Rural Electrification Administration (REA)
    Regional Planning Commissions (RPC)
    Economic Development Administration (EDA)
    Office of Minority Business Enterprise (OMBE)
    Small Business Administration (SBA)
    Community Services Administration (CSA)
    Department of Housing and Urban Development (HUD)

In general, we included those programs that have job creation as one of their objectives. It was not our intent to be all-inclusive, but rather to have sufficient data to compare the job creation effects of the various economic development programs.

We identified 56 programs that met our criteria and obtained both obligation and disbursement data from each agency whenever possible. Most of these programs began in the late 1960's and early 1970's, but only 15 still existed in fiscal year 1983. However, these remaining programs composed 44 percent of the $61.3 billion (constant dollars) obligated for the 56 programs during the 1969-78 period.

Federal economic development assistance is generally provided in the form of a grant, a direct loan, or a loan guarantee. This assistance can be used for various purposes. The 56 programs were classified according to their primary purpose as follows: public works, community development, business development, and technical assistance. Table 6 presents a summary of the amounts obligated and disbursed by purpose. Table 7 gives more detail on a program-by-program basis.

Federal funds are obligated prior to being actually disbursed. However, all obligated funds are not necessarily disbursed. This, along with the fact that some agencies were not able to provide us with disbursement data, may help to explain why obligations in tables 6 and 7 are larger than disbursements. Also, timing is an issue in the imbalance between obligations and disbursements. Over the long run, program disbursements cannot

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exceed obligations, and, in fact, are likely to be much less.[1]
But for a given period the opposite may occur because of sharp
changes in annual funding. For example, a previous period may
have experienced high levels of obligations which become
disbursements in the current period.

Table 6

Total Obligations and Disbursements for
Economic Development Programs Between
FY 1969-78 Used in Our Survey[a]
(in billions of constant 1972 $)

	Disbursements	Obligations
Grants		
Public works	$ 4.3	$ 8.9
Community development	.1	9.2
Business development	.1	.1
Block	7.6	8.0
Technical assistance, planning, and demonstration projects	.5	1.3
Direct loans		
Community development	10.7	17.4
Business development	2.1	2.9
Loan guarantees		
Community development	0[b]	.8
Business development	2.2	12.7
Total	$27.6	$61.3

[a]Some agencies were not able to provide us with data
(particularly on disbursements) going back to 1969.

[b]No disbursement occurs on a loan guarantee unless there is a
default.

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[1]Usually some portion of obligated funds is never disbursed.
For loan guarantees, the federal government wants obligations
to greatly exceed disbursements over the long (and short) run.
Loan guarantee obligations represent merely a promise to back a
loan, while disbursements represent actual defaults.

Table 7

Economic Development Grant, Loan, and Loan Guarantee Programs Between FY 1969-78 Used in Our Survey[a]
(in millions of constant 1972 $)

GRANTS

PUBLIC WORKS

Agency	Program name	Disbursements	Obligations
ARC	Appalachian Regional Development	$ 0.65	$ 1.02
ARC	Appalachian Development Highway System	-[b]	1,453.78
ARC	Appalachian Special Transportation Related Planning, Research and Demonstration Program	-	2.29
EDA	Local Public Works Program	2,466.11	4,319.22
EDA	Grants and Loans for Public Works and Development Facilities	1,270.02	1,297.42
EDA	Public Works Impact Projects	154.86	207.98
FmHA	Water and Waste Disposal Systems for Rural Communities	402.90	861.73
HUD	Basic Water and Sewer Facilities Grants	-	562.05
HUD	Neighborhood Facilities Grant	-	165.29
HUD	New Communities Supplementary Grants	-	49.24

COMMUNITY DEVELOPMENT

Agency	Program name	Disbursements	Obligations
ARC	Appalachian Supplements to Federal Grant-in-Aid (Community Development)	-	$ 105.42
ARC	Appalachian Housing Assistance		8.17
ARC	Appalachian Local Development District Assistance	-	22.76
ARC	Appalachian Mine Area Restoration	-	1.96

[a]Some agencies were not able to provide us with data going back to 1969.

[b]A dash (-) indicates the agency could not provide annual disbursement data on a county basis.

Agency	Program name	Disbursements	Obligations
ARC	Appalachian Vocational and Other Education Facilities and Operations	–	$ 74.72
CSA	Community Action	–	237.01
CSA	Community Economic Development	–	160.09
HUD	New Communities Supplementary Grants	–	4.79
HUD	Model Cities Supplementary Grants	–	2,237.75
HUD	Urban Renewal Projects	–	1,794.06
HUD	Urban Renewal Demonstration Grants	$ 98.60	4,505.78
RPC	Four Corners Supplements to Federal Grant-in-Aid	21.03	26.43

BUSINESS DEVELOPMENT

Agency	Program name	Disbursements	Obligations
ARC	Appalachian Regional Development	$ 2.52	$ 4.46
FmHA	Industrial Development Grant	26.94	37.72
HUD	Urban Development Action Grants	38.02	66.61
OMBE	Minority Business Development--Management and Technical Assistance	–	23.42

BLOCK GRANTS

Agency	Program name	Disbursements	Obligations
HUD	Community Development Block Grants, Large Cities	$6,888.52	$7,181.85
HUD	Community Development Block Grants, Small Cities	750.71	785.55
HUD	Community Development Block Grants, Indian Set Asides	5.27	6.01

TECHNICAL ASSISTANCE, PLANNING GRANTS,
DEMONSTRATION PROJECTS, AND OTHER

Agency	Program name	Disbursements	Obligations
ARC	Appalachian Housing Technical Assistance	–	$ 2.96
ARC	Appalachian State Research, Technical Assistance, and Demonstration Projects	–	33.45
ARC	Other ARC Programs	–	107.36
EDA	Support for Planning Organizations	$ 55.62	55.89
EDA	Technical Assistance	120.06	132.92
EDA	State and Local Economic Development Planning	40.98	47.71
EDA	District Operational Asst.	2.34	2.78
EDA	Other EDA programs	245.87	427.65
FmHA	Comprehensive Areawide Water and Sewer Planning Grants	–	4.52
FmHA	Area Development Assistance Planning Grants	–	3.32
HUD	Comprehensive Planning Asst., Section 701	–	482.59
HUD	Model Cities Supplementary Grants	–	0.53
RPC	Four Corners Regional Economic Development	–	0.34

DIRECT LOANS

COMMUNITY DEVELOPMENT

Agency	Program name	Disbursements	Obligations
EDA	Other programs	$ 64.01	$ 75.20
EDA	Grants and Loans for Public Works and Development Facilities	99.63	53.59
FmHA	Resource Conservation and Development Loans	6.93	7.62
FmHA	Water and Waste Disposal Systems for Rural Communities	1,787.81	2,538.62
FmHA	Community Facilities Loans	445.40	658.54
HUD	Public Facilities Loans	–	113.91
HUD	Section 312 Rehabilitation Loans	–	378.03
REA	Rural Electrification Loans	6,981.90	11,191.32
REA	Rural Telephone Loans	899.28	1,418.94
REA	Rural Telephone Bank Loans	518.29	919.56

BUSINESS DEVELOPMENT

Agency	Program name	Disbursements	Obligations
EDA	Business Development Asst.	$ 316.64	$ 308.03
EDA	Trade Adjustment Assistance	25.50	42.89
FmHA	Business and Industrial Loans	28.37	32.34
SBA	Displaced Business Loans	225.86	247.85
SBA	Economic Opportunity Loans	442.25	488.54
SBA	Small Business Investment Companies	-	539.51
SBA	Section 7(a) Small Business Loans	747.44	824.27
SBA	State and Local Development Company Loans	303.19	353.33
SBA	Base Closing Economic Injury Loans	19.73	21.31
SBA	Economic Dislocation Loans	9.47	9.82

LOAN GUARANTEES

COMMUNITY DEVELOPMENT

Agency	Program name	Disbursements[c]	Obligations
FmHA	Resource Conservation and Development Loans	-	$ 2.98
FmHA	Water and Waste Disposal Systems for Rural Communities	-	566.81
HUD	New Communities Loan Guarantees	-	279.61

BUSINESS DEVELOPMENT

Agency	Program name	Disbursements[c]	Obligations
EDA	Business Development Asst.	-	$ 214.73
EDA	Trade Adjustment Assistance	-	21.70
FmHA	Business and Industrial Loans	$ 765.51	1,405.58
SBA	Displaced Business Loans	0.36	1.81
SBA	Economic Opportunity Loans	75.50	272.06
SBA	Section 7(a) Small Business Loans	1,340.82	10,676.72
SBA	State and Local Development Company Loans	21.43	128.40
SBA	Base Closing Economic Injury Loans	0.08	0.32

[c]Disbursements for loan guarantees represent a default.

GAO's ECONOMETRIC MODEL

We based our model on previous research in both the United States and Great Britain.[1] What follows is a summary of our model. A more detailed technical discussion is contained in our staff study entitled Federal Economic Development Assistance Program: An Econometric Analysis of Their Employment Effects, 1974-78 (GAO/OCE-84-5). Following the National Bureau of Economic Research study, we used a simple supply and demand framework of the labor market to assess the job-creating effects of federal economic development assistance programs. The supply of labor (E^s) is a function of relative wages (W), national employment growth (S), and other socioeconomic variables (Z_k) related to labor supply. The demand for labor (E^d) is a function of relative wages (W), national employment growth (S), federal expenditures (F_g) (both economic development assistance and other expenditures), and other socioeconomic variables (Z_k) related to labor demand. Since the effects of federal involvement in any one year may not be fully realized for several years, we constructed distributed lag variables for grants, loans, and loan guarantees.

The set of variables in both the supply and demand functions has either been used in previous single equation studies or studies that built multiequation regional econometric models.[2] A price factor, here the relative wage rate, is common to most supply and demand studies. A shift-share factor, here national employment growth, is used in regional economics to distinguish between national and regional effects.[3] The various socioeconomic variables were used in previous studies or suggested by a panel of experts who reviewed an earlier draft of the model. Other variables, which from a conceptual point of view appeared important, were excluded because of statistical insignificance or a lack of available data.

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[1] See, for example, National Bureau of Economic Research, "An Analysis of Federal Economic Development Programs," 1976; Brian Ashcroft and Jim Taylor, "The Movement of Manufacturing Industry and the Effect of Regional Policy," Oxford Economic Papers 29 (1977):84-101; and Randolph C. Martin and Robert E. Graham, Jr., "The Impact of Economic Development Administration Programs: Some Empirical Evidence," Review of Economics and Statistics 62 (February 1980):52-62.

[2] See, for example, Martin and Graham, op. cit., and Walter Isard and Luc E. Anselin, "Integration of Multiregional Models for Policy Analysis," Environment and Planning A 14 (March 1982): 359-376.

[3] See, for example, Stephen Fothergill and Graham Gudgin, "In Defense of Shift-Share," Urban Studies 16 (1979):309-319.

Many of the variables are expressed in annual percentage change terms (shown as a lower case letter) rather than levels (shown as an upper case letter) because we are interested in job growth. The equations are specified as follows:

(1) Supply equation $e_i = E^S(w_i, s_i, Z_k)$

(2) Demand equation $e_i = E^d(w_i, s_i, Y, F_g, Z_k)$

(3) Equilibrium condition

$$E^S(w_i, s_i, Z_k) = E^d(w_i, s_i, Y, F_g, Z_k)$$

where e_i = annual percentage change in employment for the ith industry, $i = 1, \ldots, n$

w_i = annual percentage change in relative wages per worker in the ith industry

s_i = shift-share factor (national growth rate in employment for the ith industry)

Y = relative attractiveness factor (labor and proprietors' income deflated by distance)

F_1 = a proxy for the targeting effect (obligated federal economic development grants per $1,000 of income in year t)

F_2 = disbursed federal economic development grants per $1,000 of income distributed over 4 years (a weighted distributed lag)

F_3 = obligated economic development loan guarantees per $1,000 of income distributed over 4 years (a weighted distributed lag)

F_4 = disbursed economic development loans per $1,000 of income distributed over 4 years (a weighted distributed lag)

F_5 = level of other federal involvement (military and highway obligations per $1,000 of income in year t)

Z_1 = employment opportunities in state and local government (state and local goverment employment per capita)

Z_2 = percentage of state population living in metropolitan areas

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z_3 = state unemployment rate

z_4 = percentage mean annual possible sunshine

z_5 = a dummy variable for Nevada

z_6 = a dummy variable for Wyoming

z_7 = a proxy for business conditions (state corporate income tax revenue relative to personal income)

z_8 = percentage of payroll per employee used for housing rental expense

The econometric analysis was based on pooling cross-section and time-series data where each observation represented a given state in a given year over the years 1974-78. Since some of the variables were expressed in annual percentage change terms, we had a total of 204 observations. The sources for the data are as follows:

e_i, w_i, and s_i -- U.S. Bureau of the Census, County Business Patterns (various years).

Y -- The source for the numerator was U.S. Bureau of the Census, County Business Patterns (various years). These figures were deflated using a distance matrix supplied by the U.S. Bureau of Economic Analysis.

F_1, F_2, F_3, F_4 -- We collected the numerator from agency computer files. The source for the denominator was U.S. Department of Commerce, Survey of Current Business (various years).

F_5 -- The source of the numerator was Community Services Administration, Geographical Distribution of Federal Funds (various years). The source of the denominator was U.S. Department of Commerce, Survey of Current Business (various years).

z_1 -- The source of the numerator was U.S. Bureau of the Census, Public Employment, Series GE, No. 1 (various years). The source of the denominator was U.S. Bureau of the Census, Statistical Abstract of the United States: 1980.

z_2, z_3 -- U.S. Bureau of the Census, Statistical Abstract of the United States: 1980.

z_4 -- U.S. Bureau of the Census, County and City Data Book, 1977.

z_5, z_6 -- 0, 1 dummy variables.

Z_7 -- The source of the numerator was U.S. Bureau of the Census, <u>State Government Tax Collections</u>, Series GF, No. 1 (various years). The source for the denominator was U.S. Department of Commerce, <u>Survey of Current Business</u> (various years).

Z_8 -- The numerator was constructed from data in U.S Bureau of the Census and Department of Housing and Urban Development Annual Housing Survey, Series H-170 (various years), (Part B, Housing Characteristics for Selected Metropolitan Areas); and CPI component data on residential rent supplied by the Bureau of Labor Statistics. The source for the denominator was U.S. Bureau of the Census, <u>County Business Patterns</u> (various years).

STANDARD INDUSTRIAL CLASSIFICATIONS

We grouped employment and payroll data into 10 industry categories using standard industrial classifications (SICs). The model registered statistically significant results for five industry groups. Table 8 shows examples of the major industries included in each of these five industry groups.

Table 8

Types of Industries in the Standard Industrial Classification Where We Obtained Significant Results

Standard Industrial Classification	Type of industry
Household-oriented trade (wholesale and retail)	Food stores Department stores Auto sales Furniture Apparel Hardware Sporting goods Liquor and tobacco
Manufacturing	Petroleum and chemical Electrical and aerospace Textiles Primary metals Machinery Auto, rail, and ship Lumber and paper products Photo and medical equipment
Contract construction	Residential building Highway and bridge Nonresidential building Painting, plumbing, electrical, etc.
Banking, insurance, and real estate	Commercial banking and securities Insurance Savings and loans Mortgage bankers Real estate agents

Personal services

Dry cleaning, shoe repair,
  etc.
Hotel and motel
Auto repair
Movies, banking, clubs, etc.
Schools and universities
Doctors, dentists, and
  hospitals
Legal services

ANALYSIS OF REGIONAL EFFECTS

Because the estimates apply to the average state, the analysis implicitly assumes that all states respond to economic stimulus in the same manner. To examine the restrictiveness of this assumption, we separated the states into three categories based on employment growth from 1974 to 1978 using hierarchical cluster analysis.

This type of analysis is used to help identify clusters of observations having similar attributes. It is used primarily where no prior information about the data is available. First, one cluster is formed for each observation in the analysis. The two closest clusters are combined into one cluster, then the two closest of the new set of clusters are combined into a single cluster, and so on.

Table 9 shows the results of our analysis. The low employment growth region is composed primarily of the northeastern and midwestern sections of the United States. The high employment region contains the southern and western sections.

Table 9

Regional Breakdown of States Grouped by Employment Growth from 1974 through 1978[a]

Low employment growth	Medium employment growth	High employment growth
Connecticut	Alabama	Arizona
Delaware	Arkansas	California
District of	Georgia	Colorado
Columbia	Hawaii	Idaho
Florida	Iowa	Kansas
Illinois	Kentucky	Louisiana
Indiana	Maine	Minnesota
Maryland	Michigan	Montana
Massachusetts	Mississippi	New Hampshire
New Jersey	Missouri	New Mexico
New York	Nebraska	North Dakota
North Carolina	Oklahoma	Oregon
Ohio	South Carolina	South Dakota
Pennsylvania	Tennessee	Texas
Rhode Island	Virginia	Utah
West Virginia	Wisconsin	Vermont
		Washington

[a]Alaska, Nevada, and Wyoming were excluded from the groups because their growth patterns were significantly different from the average for any of the three categories.

COUNCIL OF ECONOMIC ADVISERS
WASHINGTON D C 20500

MARTIN FELDSTEIN CHAIRMAN
WILLIAM A NISKANEN
WILLIAM POOLE

May 4, 1983

Dear Mr. Myers:

This is in response to your March 29 letter to Chairman Feldstein regarding the GAO Report, "The Effectiveness of Federal Economic Development Programs."

We have reviewed a draft of the Report and have discussed it in detail with the GAO staff members who are responsible for it. The report is an attempt to apply economic analysis to determine the effects on gross job creation of Federal grant, and loan guarantee programs.

We support the use of economic analysis and econometric techniques for this effort. The results of a well-done economic study should provide a better picture of the effects of these programs than the kind of anecdotal case studies that are often produced. Nevertheless, we believe that this Report needs additional work to remedy some technical deficiencies before it is released.

Our specific objections and recommendations have been relayed to the GAO staff members involved, and we have indicated our willingness to assist them. When these technical deficiencies are remedied, we would like to have the opportunity to review the report once again.

Sincerely,

William A. Niskanen
Member

Mr. Morton A. Myers
Director
United States General
 Accounting Office
Program Analysis Division
Washington, D. C. 20548

[GAO COMMENT: The Council of Economic Advisers had two main
concerns. First, we should present the long-run equilibrium
estimates (the draft had only the short-run response). Second,
we should not present the estimates for grants, loans, and loan
guarantees in one table, because the reader may be misled into
comparing the results between types of assistance. Even though
the text points out that it is not appropriate to compare these
various types of assistance, the Council believed that these
results should be presented in three separate tables.

We did the analysis to produce the long-run response and
revised the tables as the Council suggested. We also gave the
Council an opportunity to review the revised report and it was
satisfied with our revisions.]

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D C   20503

MAY 6 1983

Mr. William J. Anderson
Director
General Accounting Office
Washington, D.C.   20548

Dear Mr. Anderson:

Thank you for the opportunity to comment on your draft report,
"The Effectiveness of Federal Economic Development Programs
(PAD-83-42)". After careful review of this document, we find that
it has substantial methodological problems. These problems place
into serious question any findings of the analysis and should be
resolved before the report is released to avoid the presentation
of possibly erroneous conclusions. The most serious of the
report's problems are discussed below.

1   ° The programs which are considered are neither a complete
       listing nor a representative sample of the Federal programs
       aimed at job creation. Consequently, results that come from
       this unrepresentative sample cannot be used to make
       generalizations about the effectiveness or costs of Federal job
       creation programs.

2   ° There is inadequate information presented in the report to
       justify the drawing of the report's conclusions.

3   ° There are numerous methodological problems with the econometric
       model used in support of the analysis. The regional
       econometric models developed by universities, the private
       sector, and the Bureau of Economic Analysis at the Department
       of Commerce are valuable for making some types of estimates,
       but are not sensitive enough to measure the job effects of
       different types of Federal programs. The report does not
       indicate any support for the contention that the model employed
       is sensitive enough to estimate such effects, nor a comparison
       with existing models to show why it is preferrable to those now
       in use.

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[GAO COMMENT:

1.   The Subcommittee's January 26, 1982, letter requested that
     we evaluate economic development programs. We were not
     asked to consider all federal programs aimed at job
     creation; thus OMB is addressing a different issue. Our
     selection of economic development programs is far more
     comprehensive than OMB's own definition of these programs.
     (See p. 2, footnote 2 of this report.)

2.   Our results were obtained from a model based on the labor
     sector of large-scale regional econometric models. Our
     data sources were standard Bureau of Census publications
     except for data on federal economic development programs,
     which we collected from each agency considered. We based
     our econometric analysis on standard multivariate tech-
     niques, and we were especially careful in dealing with
     collinearity problems through the use of ridge regression.
     However, our intent was to present results of the model
     with a minimum amount of technical discussion. After all
     of the agency comments were received, we decided to prepare
     a technical document with more complete technical infor-
     mation. This document was then sent to the agencies for
     comment, and their comments are published along with the
     technical document.

3.   The model used here is a detailed pooled cross-sectional
     version of the labor sector in large-scale regional
     econometric models. One advantage of our model over BEA's
     complete regional model is that our model can evaluate
     different grant categories (public works vs. other)
     simultaneously. Incidentally, our results that low
     employment growth states are more sensitive to federal
     economic development assistance is consistent with results
     from BEA's model.[1] We consulted with BEA as we developed
     our model and many of its comments were incorporated into
     the model.]

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[1]See John R. Kort and Richard D. Gustely, "Regional Cyclical
Sensitivity and Federal Grants: An Analysis of the Allocation
and Impact of Countercyclical Aid," paper presented at the
Southern Economic Association Meetings, November 5, 1980.

4   • The description and documentation of the econometric model
       developed is extremely sketchy. There is no way to tell what
       underlying economic relationships have been assumed in the
       model. For example,

       -- The report does not discuss how a grant program affects
          economic variables differently from the way a loan program
          affects economic variables.

       -- The meaning of the four year distributed lags for Federal
          programs is not clear. If they have to do with the
          spend-out rate of the program levels, this is an erroneous
          assumption because each program has a different disbursement
          rate.

       -- It is unclear how the variable "Y", relative attractiveness
          factor, is measured, and why it enters the supply equation.

       -- The data used for the variables is not described.

5   • Several variables used in the model seem inappropriate. For
       example,

       -- A shift-share factor does not explain changes in the State's
          share of a nation's industry.

       -- Income tax revenue is not a good proxy for business
          conditions, because a State's tax rate has a large influence
          on the income tax revenue that would be forthcoming.

6   • The report fails to include a discussion of variables and
       relationships which previous studies have identified as most
       relevant in indicating the job effects of economic development
       and other job creation programs. Among these are timing,
       delivery mechanisms, and involvement of other levels of
       government and the private sector. These omissions from the
       report prevent us from contrasting the results with previous
       studies. If they are omitted from the model, they could
       contribute to an erroneous attribution of causality to some
       variables. In any econometric model, the omission of variables
       thought to be relevant explanatory factors can cause the
       effects of the included variables to be overstated or
       misrepresented.

[GAO COMMENT:

4.   We have expanded appendix II to provide more documentation.
       Also, we intend to publish a separate technical paper pro-
       viding technical details on the model and the estimation
       technique. The report discusses the differences between the
       subsidies associated with grants, loan guarantees, and
       direct loans. (See p. 9.)

       A 4-year lag is not assumed. We considered various lagged
       structures, including an arithmetic lag, an inverted V lag,
       and Almon polynomial lags. We chose the 4-year lag because,
       for this data set, it had the best explanatory power.

       The variable Y is a distance deflated variable. It measures
       income relative to the incomes of other states weighted by
       distance. Presumably, states closer to a given state have
       more influence on the income of the given state than states
       farther away. Several regional econometric models use
       distance deflated variables. We obtained the distance
       matrix from BEA. (See app. II, p. 9, data sources.)
       Also the variable Y does not enter the supply equation.
       (See app. II, p. 8, equations 1 through 3.)

       Basically, we collected federal assistance programs data
       from the agencies and other economic data from Census
       sources. We have revised appendix II to include a detailed
       listing of our data sources.

5.   The shift-share factor is used here to capture the business
       cycle effects. The other independent variables, including
       federal assistance variables, pick up employment effects not
       associated with changes in the business cycle.
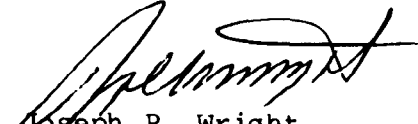
       We tried to measure the effective tax rate, rather than the
       nominal tax rate. Thus, the proxy for business conditions
       was corporate tax revenue divided by a tax base, here
       personal income because consistent data on the actual
       corporate tax base are difficult to obtain.

6.   The variables mentioned are commonly considered in case
       studies. However, data for the variables suggested are not
       collected in any consistent fashion, so these variables
       could not be included in our model. On page 2 of this
       letter, we point out how our methodology differs from case
       studies. Because of these differences, the results
       from the two approaches cannot be contrasted in any
       meaningful way.]

7   ° The report lacks a documentation of the econometric results. A
      presentation of the estimated coefficients -- the direction and
      size of the contribution of each independent variable in
      explaining employment -- is necessary in order to intepret the
      strength of the results. As part of this presentation, a test
      of the statistical significance of each variable should be
      included to verify that the measured effects are likely to be
      real and not due to chance.

8   ° The analysis omits a discussion of three issues that are
      crucial to the evaluation of Federal economic development and
      other job programs: (1) substitution, (2) relocation, and (3)
      the distinction between temporary and permanent jobs. Analysis
      of substitution requires a determination of whether the
      projects undertaken with Federal funds would have been funded
      either by State and local governments or the private sector.
      To the extent that they were, jobs attributed to Federal
      programs would otherwise have been created without Federal
      involvement. The issue of relocation requires an assessment of
      whether the jobs "created" in the State or local area would
      have been located elsewhere in the nation in the absence of the
      program. The question of whether any of the jobs counted were
      short-run construction jobs or permanent jobs in other
      industries that endure beyond construction years has not been
      addressed. Without clarification of these issues, net
      permanent job creation estimates are impossible to interpret.

9   ° Finally, although the report acknowledges that the analysis
      ignores jobs that might have been created with an alternative
      use of the funds, this point is not brought to bear in the
      presentation of results. The conclusion that economic
      development programs create jobs ignores the jobs-reducing
      effects of the withdrawal of funds from elsewhere in the
      economy, and is therefore erroneous and misleading.

In summary, the sample is not well constructed, the model and
economic assumptions behind it are not well developed, adequate
accounts have not been made of the substitution and relocation
effects, of short-run and long-run job creation and of the
withdrawal of program funds from other sectors of the economy. We
believe that these serious shortcomings need to be addressed
before the draft report "The Effectiveness of Federal Economic
Development Programs" is released.

                              Sincerely,

                              Joseph R. Wright
                              Deputy Director

[GAO COMMENT:

7.   The documentation was provided in the technical paper that
      was subsequently sent to the agencies. The model includes
      variables to estimate the jobs related to private economic
      activity and to state and local government hiring. We used
      standard multivariate techniques to control for factors
      other than federal economic development assistance
      programs. But to report every econometric result would
      have unduly complicated this report.

8.   We do not consider substitution in the same way as the case
      study approach. The case study approach relies on interview
      data of what might have happened had the federal government
      not been involved in a particular project. This information
      is not sufficient to make generalizations about substitution
      for the whole program. An econometric model, on the other
      hand, deals with the substitution issue by addressing the
      question of how many new jobs were created by assistance as
      opposed to some other factor. The model includes variables
      to evaluate the jobs related to private economic activity
      and to state and local government hiring. Thus, the federal
      government is credited with job growth only where other
      variables cannot account for the new jobs. We consider that
      relocated jobs are jobs created in the area targeted for
      federal assistance. Thus, employment growth in one area
      will be higher than in another area. The model was not
      designed to answer the question of what would have happened
      without the program. As for temporary versus permanent
      jobs, we measure the annual change in total employment
      (see page 3). The revised tables do indicate short-run and
      long-run effects in terms of annual change in total
      employment.

9.   The model tracks the programs that existed during 1974 to
      1978. It was not designed to answer the question of what
      would have happened if these programs had not existed. Any
      program evaluation is limited to the historical record of
      what actually happened. We found no acceptable methodology
      for determining what would have happened if the historical
      record had been different.]

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON D C 20410

May 6, 1983

ASSISTANT SECRETARY FOR
POLICY DEVELOPMENT AND RESEARCH   IN REPLY REFER TO

Mr. Morton A. Myers
Director, Program Analysis Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Myers:

Secretary Pierce has asked me to respond to your letter of
March 30, 1983, which requested comments on a draft General Accounting Office
report entitled "The Effectiveness of Federal Economic Development
Programs."

The report was designed to address Congressman James L. Oberstar's
request that GAO develop "a common model for evaluating direct and indirect
effects of Federal economic development programs on jobs..." The report
contains an econometric model developed by GAO to answer this request. Such
a model could be extremely valuable to policy makers and legislators in
assessing the relative merits of various economic development programs.
However, it is difficult to tell from the report's description of the model
whether several key factors were omitted from consideration or simply not
discussed. In addition, in some cases, GAO has noted that factors were
omitted, but has not adequately covered the impact of these omissions. We
believe that if the model does not contain these factors it is methodolog-
ically flawed and that the reliability of the conclusions is questionable.
Our specific problems with the model follow.

1   First, as the report admits, the model does not consider whether jobs
created under Federal economic development programs substituted for jobs that
would have been created had other sources of funds been available. This is a
major omission in the report. The estimates of jobs created are "gross"
rather than "net," since the model does not examine the effects of Federal
economic development programs on other forms of investment. Discounting for
substitution would likely alter not only the magnitude of the dollar
estimates, but also the relative magnitude across programs, since
substitution rates appear to vary greatly depending on the method of subsidy
provision and the administrative controls.

2   Second, the model fails to account for the duration of the jobs
created. The figures in the report do not distinguish between short-term
construction jobs and long-term manufacturing employment. The former have a
temporary stimulus characteristic; the latter have implications for economic
development. Thus, the report should state what standard unit GAO used in

[GAO COMMENT:

1. The model was not designed to estimate what would have
    happened if resources were used differently; rather it was
    designed to track what did happen during 1974 to 1978. We
    found no acceptable methodology for determining what would
    have happened had the historical record been different.

2. Our analysis has been revised and the tables present both
    short- and long-run equilibrium effects.

    Employment data were not obtained from agency estimates, but
    rather from a standard source, County Business Patterns.
    Employment is the count of employees, both full and part-
    time, in the mid-March pay period as reported on the
    Employer's Quarterly Federal Tax Return. Thus, we measured
    job effect by the annual change in total employment. Here,
    employment in construction is treated the same as employment
    in manufacturing. We have revised appendix II to include a
    detailed listing of our data sources.]

measuring jobs. For example, were full-time and/or part-time jobs measured? Were long-term and/or short-term jobs measured? The report should also note the data sources and standard unit used for each program studied, so that readers can determine whether comparisons can be made. When the Office of Policy Development and Research evaluated the Urban Development Action Grant Program (UDAG), an attempt was made to compare the cost of a job created under UDAG with the cost of jobs created under other programs. However, the Office found no consistency in definitions of standard units across programs and was unable to complete this analysis. The report should state how GAO resolved this problem and what definitions were used.

3   Third, in comparing the effects of various types of Federal subsidy mechanisms, the report does not adequately explain how cost estimates were derived for these mechanisms. There are substantial differences in the cost to the Federal Government of grants and loan guarantees. The total cost of a loan guarantee should reflect only possible future defaults and should be reestimated in terms of its present value to make it comparable to outlays for other programs.

4   Fourth, the report does not define or explicitly distinguish between the direct and indirect effects of Federal economic development programs. On page 7, the report seems to assume that there are direct effects from jobs created in the construction industry, but only indirect effects from jobs created in the manufacturing sector. Are the effects determined by the nature of the industry or whether there is spinoff employment to secondary industries? How can conclusions be drawn about direct and indirect effects if the model does not separately estimate these two components, as is stated on page 4 of the report?

5   Fifth, the report should state whether the model includes an adjustment factor to account for excess capacity, i.e., to what extent the jobs would have been created regardless of whether or not the country was in a recession.

6   Sixth, the validity of the model has a direct bearing on the validity of the conclusions. In several cases, the model has produced inaccurate or inappropriate conclusions. For example, the report notes that "Grants were most effective in creating jobs in States with low employment growth." This statement combines two very different conditions--States with low growth rates and low unemployment and States with low growth rates and high unemployment. The key variable is unemployment not economic growth. However, it is unclear, as noted above, whether the model includes an adjustment for unemployment. As another example, the report compares the ability of various subsidy mechanisms to create jobs and finds that "Grants created more jobs than loan guarantees..." While there may be a different cost to the Federal Government for each type of subsidy mechanism, the end result may not differ, depending on how the funds are passed to the entity creating the jobs. A dollar spent through a grant program may have the same effect as a dollar spent through a loan guarantee program--the program recipient has the same amount of money to spend for job creation regardless of the subsidy mechanism. So the model, as developed, produces a flawed conclusion.

7   We are also concerned about the wide variation between the findings in the GAO report and other Federally funded studies on economic development programs. The report states that the average cost-per-job under grant

[GAO COMMENT:

3.   The report points out that we cannot make comparisons be-
      tween grants, loans, and loan guarantees because the cost to
      the federal government is different in each case. The
      report also points out that the scope of this review did not
      include this estimation. (See p. 9.)

4.   HUD is correct in pointing out a section that needed further
      clarification. We have made the necessary revisions. Our
      estimates are the sum of direct, indirect, and induced
      effects.

5.   Unemployment, a proxy for excess capacity, is already
      included in the model. (See app. II.)

6.   The model does include an adjustment for unemployment. (See
      app. II.) Regarding the second point, we have revised the
      conclusion because such a comparison may be misleading.
      However, a dollar spent through a grant program may not have
      the same effect as a loaned dollar because the loan must be
      repaid. The net benefit from the loan depends largely on
      the subsidized interest cost. In general, net benefits from
      grants versus loans versus loan guarantees may be expected
      to vary directly with the value of the subsidy conveyed.

7.   We were already aware of these studies and other more recent
      studies with cost estimates similar to ours. See, for exam-
      ple, an EDA study, Randolph C. Martin, B.F. Kiker, and
      Robert E. Graham, Jr., "The Effectiveness of Economic Devel-
      opment Administration Programs: Income Growth, Cost Per
      Job, and Human Migration," April, 1980. Our estimates are
      incremental cost rather than average cost estimates. Also,
      we estimated annual cost for a year of employment whereas
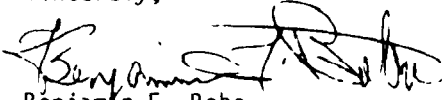   those earlier studies estimated cost for a permanent job.]

programs is $2,315. This figure should be compared with those derived from
other studies. If the figure refers to long-term job creation (it is not
clear whether it refers to long- or short-term job creation), it should be
contrasted with an Economic Development Administration (EDA) study which
found that the EDA cost for each permanent full time job created was, on
average, at least $65,000 ($19,000 in public works funds, $21,000-22,000 in
other public investments, and $24,000-25,000 in private investments--in 1976
dollars). If the figure refers to short-term jobs, other studies need to be
used for comparison. To summarize the conclusions of three specific efforts:
Rand (1977) found a cost per job of $31,000-$54,000 for jobs created under
the regular public works program and $23,000-$28,000 under the accelerated
public works program; the Congressional Budget Office (1975) estimated a
cost per job of $12,000-$20,000 for public service employment; and the
Department of Transportation (1979) estimated that each job created through
highway construction grants cost $125,000. We have enclosed a bibliography
of some studies on this subject. There may be other studies, which should
also be taken into account.

8   It would also be helpful to policy makers if the report made some
comparative conclusions about the programs included in the study (Table 5).
Do some programs (rather than types of subsidy mechanisms) create jobs more
efficiently than others? Are there spatial (e.g., jurisdictional, regional)
characteristics that can be associated with the effectiveness of the
programs included in the study? While it is not necessary for the purposes
of this report, policy makers would also need to look at the operational
aspects of programs before considering recommendations on which subsidy
mechanisms and programs are most effective. For example, one of the
findings of the EDA study was that the key to the success of Federal grants
for job creation was the establishment of working relationships between
governmental units, program officers, and local private institutions (e.g.,
development foundations, Chambers of Commerce). Results of grants that were
run entirely through public units were generally disappointing.

9   Finally, the report's data presentation could be improved. In some
cases, the data are not sufficiently disaggregated. For example, a breakdown
of the column headings in Table 2 similar to those provided in Table 5 would
be desirable. In Table 2, a better explanation should be provided of why
the rows do not add. The current explanation that "estimates were derived
independently, so totals do not add" is inadequate in view of the great gaps
that are shown.

      In conclusion, we believe that additional explanation of the derivation
of the model is necessary before it can be used by policy makers to review
the effectiveness of various Federal economic development programs.

                                        Sincerely,

                                        Benjamin F. Bobo
                                        Acting Assistant Secretary

Enclosure

[GAO COMMENT:

8.   We have pointed out that our results indicate that public
        works programs relative to other grant programs are more
        cost-effective (table 4). Our results also suggest that
        grants were more effective in low employment growth
        states (table 5) that are located mainly in the northeast
        and north-central sections of the country. (See app. IV.)

        Again, we must reemphasize that the Subcommittee requested
        us to develop a uniform methodology so that comparisons
        could be made across programs. This is impossible to do
        using the case study approach. Each methodology provides
        a different type of information to the policymaker.

9.   The tables have been revised. Also, we have expanded appen-
        dix II to provide more documentation. We intend to publish
        a separate technical paper providing explicit technical de-
        tails on the model and the estimation technique.]

Bibliographical References

1. Peggy L. Cuciti, City Need and the Responsiveness of Federal Grant Programs, Subcommittee on the City, U.S. House of Representatives, 1978.

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3. Congressional Budget Office, "Temporary Measures to Stimulate Employment: An Evaluation of Some Programs," 1975

4. Chase Econometrics, Inc., "Evaluation of the National Impacts of the Local Public Works Program," 1979.

5. U.S. Department of Transportation, Highways Operations Office, "Generation of Employment," 1979.

6. Paul W. Kolp and Marilyn Schule, Economic Development Administration Title 1 Public Works Program Evaluation: Results and Methodology, Centaur Associates, Inc., Washington, DC, May 1979.

7. Edward E. Leamer, "Lets Take The Con out of Econometrics," American Economic Review, March 1983.

SBA

MAY 2 4 1983

Mr. Morton Myers
Director, Program Analysis Division
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Myers:

We have reviewed the draft report entitled, "The Effectiveness
of Federal Economic Development Programs" and we have the
following comments.

In general, the report has a worthy goal in seeking to measure
the relative effectiveness of federal economic assistance
programs. However, the title of the report does not appear to
reflect its contents. For example, no attempt was made to
assess the cost-benefit relationship of various Federal
Assistance Programs with a common basis. The report points out
that grant data is not comparable to direct loan or guarantee
loan data. Also, the grant data is based on disbursement while
loan data is based on obligations.

Unfortunately, qualification as to comparability are not noted
in the various tables, particularly Table 1. This table
identifies increases in Economic Development Assistance in
terms of increments of $500,000. The implication is that this
amount of assistance per job is based on comparable costs. In
fact, the dollar figure for grants is derived from
disbursements, whereas the basis of loan guarantee is
obligations. In the loan guarantee area, disbursements are
16.3% of obligations. On a disbursement basis, the amount of
assistance per additional job is $1430 (16.3% of $8772).
Consequently, we cannot accept the statement that "Grants
created relatively more jobs than loan guarantees and loan
guarantees more than direct loans" (p.2), nor can we accept the
misleading title of the report. A more appropriate title of
the report might be "Employment Elasticity Estimates of Various
Federal Economic Development Programs".

We would also suggest that the amount of assistance per
additional job for loan guarantees and direct loans show
disbursement per job and display obligations per job in
parenthesis.

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Another concern we have is the estimate of $2,016 to create a   .
job with public works grant disbursements in the average state
in the average year over the 1974-1978 period and based on 1972
constant dollars. Using the ratio of the 1982 consumer price
index (289.1) divided by the 1972 consumer price index (125.3)
as a liberal estimator of the current cost of disbursements, we
find a 131% increase or $4,651. This figure is substantially
below the minimum wage and substantially below any numbers
mentioned in recent Congressional debate on the gasoline tax
provided by the Bureau of Labor Statistics which provided
estimates of one job being created for every $20,000 - 30,000
of Federal expenditures. Obviously, the disparity in estimates
of the cost of expenditures between the public works grants
surveyed by GAO and current BLS estimates are quite high even
if one makes the assumption that road construction is more
capital intensive than other public works programs.

Finally, the 503 Program came into being after 1978. The
impact of the Program is not given consideration in this study.

We appreciated the opportunity to comment on the report and if
you need any additional information, please advise.

Yours truly,

James Sanders
Administrator

GAO Note: The Small Business Administration's comments on a
           draft of this report were not received within the
           official comment period; however, we are including
           its comments and our response to those comments in
           this report.

[GAO COMMENT:

1. We have revised the title to reflect better the report's
    contents.

2. We have revised table 1 by making three separate tables
    --one for grants, one for guanteed loans, and one for
    direct loans.

3. We have pointed out that our cost estimates are
    conceptually different from research using the case
    study approach.]

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Economic Development
Washington, D C   20230

1 9 MAY 1983

Mr. J. Dexter Peach
Director
U. S. Accounting Office
Washington, D. C.   20548

Dear Mr. Peach:

Thank you for your request for comments on your draft entitled
"The Effectiveness of Federal Economic Development Programs."

I read your paper with interest. My comments are enclosed.

Sincerely,

Carlos C. Campbell
Assistant Secretary
for Economic Development

Enclosure

Comments on "The Effectiveness of Federal Economic Development
Programs"

I conclude that the GAO model has serious omissions and should
not be used for evaluating economic development programs.
GAO's methodology is an interesting departure from the case
study approach, but their resulting model falls short in
providing useful input to policymaking. GAO needs to expand
its system (data base and model specification) before
proceeding with further program evaluations.

I contend that GAO's data base is too aggregative for the
intended purpose. It is not possible to use the model to
evaluate any single program because GAO aggregates several
different programs with several different legislative
objectives into their "economic development" total. Their
model is also estimated on state data rather than the far more
disaggregated county data used in most other evaluations.
State data masks significant within state variations in program
expenditures, employment and other essential variables.

Given the time and resources devoted to this model, it is also
regretable that GAO has not chosen to model the net as well as
the gross employment impacts of development expenditures. The
net employment impact could be derived by comparing the
employment expansion resulting from program expenditures with
the employment decline resulting from reduced private capital
expenditures necessitated by increased government borrowing to
finance the Federal development programs. Cost per job
estimates may be helpful, but it is impossible to determine
with any precision just what is an acceptable cost and what is
not. There are also no fail-safe systems to preclude "double
counting."

My principle objection to the GAO approach is that it fails to
recognize the dynamic interaction between national income and
employment and the economies of specific distressed regions and
industries. This Administration emphasizes macro-policies to
promote rapid and sustained economic growth with a minimum of
inflation and unemployment. There is ample historical evidence
that a vigorous national economy is the most effective method
of assisting distressed sectors within the economy. If these
sectors cannot sustain themselves in spite of a growing
economy, they will likely fail even with government
assistance. GAO would make a greater contribution to research
by estimating the effective trade-offs between regional and
national objectives rather than by adding still another page to
the endless books of cost per job estimates for Federal
programs.

Specific Comments:

o   It is difficult to compare GAO per job estimates with
        those from other studies because the GAO model cannot
        distinguish between direct and indirect employment.

o   GAO should check out their data to explain why
        disbursements exceed obligations on some forms of EDA
        loans. The set of loans on which disbursements are
        made may be different from the set of loans obligated.

o   GAO's model is outdated. Terminal year data for 1978
        is not sufficiently current for evaluation purposes in
        1983.

o   GAO should separate countercyclical Federal aids from
        distressed area Federal aids. Countercyclical aids
        should be evaluated for their impact on the business
        cycle and not for their impact on long-term regional
        employment. Our research indicates that
        countercyclical aids frequently turn out to be
        procyclical.

GAO Note: The Economic Development Administration's comments
          on a draft of this report were not received within
          the official comment period; however, we are
          including its comments and our response to those
          comments in this report.

[GAO COMMENT:

1. In our report we caution the reader that our results are tentative, only apply to the 1974-78 time period, and cannot be used to make forecasts.

2. As we point out in the report all the programs, except those in the Rural Electrification Administration, have a common legislative objective of creating jobs. Although we were asked to evaluate these programs on only the job-creating objective, we recognize that these programs had other objectives.

   We also agree that there could be benefits from disaggregating the data, but these benefits can be offset by less reliable county-level data. Thus, we used data aggregated at the state level. However, we view this as an area for further research.

3. Neither the case study method nor our approach can deal with the question of substitution. This is pointed out in our discussion of the model's limitations.

4. We use the shift-share variable to control for national or business cycle effects, see app. II.

   Specific Comments

1. We point out that our results are not directly comparable to other studies because of a difference in the conceptual measure of costs.

2. The data in the table represent totals from 1969-78, and sharp changes in annual funding could explain why disbursements exceed obligations (see app. I for further discussion).

3. We point out that the results are tentative and caution policymakers that the estimates can not be used to make forecases.

4. The issue of countercyclical aid is mentioned in our discussion of the model's limitations.]

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D C 20250

Mr. J. Dexter Peach
Director, Resources, Community
  and Economic Development Division   ≥   June 7 1983
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

We have reviewed a copy of the GAO draft report entitled "The
Effectiveness of Federal Economic Development Programs" (PAD-83-42) and
offer the following comments. Input was received from the Farmers Home
Administration (FmHA), Rural Electrification Administration (REA),
Economic Research Service (ERS), and Office of Budget and Program Analysis
(OBPA) in developing these comments.

The GAO draft report lacks the documentation required for a complete and
accurate evaluation of its results or conclusions. Most of the
statistical results of the econometric model are not presented. The model
itself appears overly simplistic and incapable of supporting the
conclusions or providing the desired "common methodology" for evaluating
job creation associated with Federal economic development programs.

The report does not provide sufficient information on the specifications
of the model, except that it was based on a simple supply and demand
framework. The discussion of the model does not provide the rationale
used for selecting the variables, or how they were measured. For example,
the level of Federal funding is included as a variable explaining the
demand for labor. However, such funding is also related to the supply of
labor particularly when funding is allocated on the basis of a State's
unemployment or population growth. Failure to provide for the
relationship between Federal funding and labor supply and demand is likely
to have resulted in biased statistical estimates.

The GAO model also fails to include as a separate explanatory variable any
measure of State economic development assistance; e.g., the level of small
issue industrial revenue bond (IRB) sales. IRB's may have had a
potentially important influence on State-level employment growth during
the 1974-1978 period.

More fundamentally, insufficient consideration was given to the broad
range of objectives among the various kinds of Federal programs included
in the analysis. If the effectiveness of loans and grants in job creation
are to be compared, then programs having similar job creation objectives
should have been selected. For example, EDA public works grants are often
targeted to specific local areas, with the primary objective of promoting
local job creation. On the other hand, the programs of REA and FmHA (with
the exception of the FmHA Business and Industry loan guarantee program)
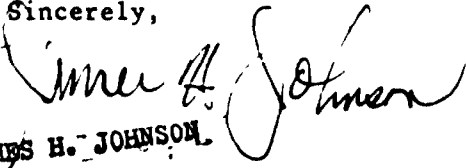have as their major objective improving the quality of life in

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rural areas by providing basic human amenities and essential public
services. Job creation is likely a resulting benefit from these programs,
but it is not a stated objective. Thus, one would expect that public
works programs, by their very nature, would be more effective in job
creation than programs in which job creation is not the major objective.
Furthermore, FmHA and REA programs are more likely to stimulate indirect
employment in various manufacturing sites throughout the nation, rather
than being limited to job creation in local areas. The GAO model does not
appear to account for such indirect employment in the average State.

Finally, some of the data used in the GAO model (shown in Table 5 of the
report) appears to be inaccurate, misleading or improperly footnoted.
For example, FmHA grants for water and waste disposal systems for rural
communities were improperly categorized under the public works grants
section. These should have been listed under the community development
grants section. Also, the time frame used to collect obligation and
disbursement data was not necessarily the 10-year period (1969-1978) used
in the GAO survey. Footnotes should have been used to reflect the review
period for each program.

In summary, the report is based on an econometric model which is faulty.
It does not present sufficient statistical documentation and it draws
conclusions which cannot be traced logically or statistically to any
supporting evidence.

More detailed comments on the GAO draft report developed by ERS are
provided in the enclosure.

Sincerely,

JAMES H. JOHNSON

Deputy Under Secretary
Small Community and
   Rural Development
   Enclosure

ERS Comments on the GAO Report "The Effectiveness of Federal Economic
Development Programs" (PAD-83-42)

The GAO has addressed an important area of economic research--The
Effectiveness of Federal Economic Development Programs. However, it
is impossible to evaluate their analysis of job creation in the
private sector in a systematic manner. The draft report does not
provide sufficient information on the specification of the GAO model,
except that it was based on a simple supply and demand framework; nor
how the model was solved, calibrated, and used in evaluating the State
employment effects of Federal economic development programs.

The draft report makes the following major claims or assertions: (1)
GAO has constructed a generalized economic (econometric) model which
substitutes for project analysis in evaluating the effectiveness of
Federal economic development programs on private sector job creation,
(2) the model determines the relative amount of assistance (grants,
loan guarantees, or direct loans) needed per additional job, and (3),
the model evaluates the cost-effectiveness of Federal grant programs.
These claims or assertions are evaluated below.

(1). Does the GAO model take into account the interaction between
economic development programs and other economic factors, and thus
represent a general way to determine the effectiveness of these
programs in creating jobs?

It is true, as GAO notes, that case study approaches to measuring
development program effectiveness are plagued by the lack of reliable
data. These approaches often involve subjective job counting. They
often fail to sort out job creation associated with specific Federal
investment from other Federal spending, or that caused by changes in
general economic conditions, or they neglect to define the overall
impacts on a community, State, or region on the basis of the number or
types of workers directly employed.

A model (theory) of regional development is required to measure the
cumulative effects of public investments on the labor market. Such a
model would provide a basis for estimating the differential impacts of
economic development programs vis-a'-vis other changes occurring
simultaneously in the regional economy and which are unrelated to the
specific programs being analyzed. Unfortunately, the GAO model
appears to be an ad hoc procedure without any theoretical foundation.

In the GAO model a classic "laundry list" of variables is used to
determine employment growth, and not necessarily job creation (since
jobs may be of different duration), in a typical year (1974-78) for an
average State. The discussion of the model does not provide the
rationale used for selecting variables such as relative wages,
national growth, and other socio-economic factors. Furthermore, the

report contains insufficient information to understand how the model
is structured, or how the variables are specified and measured.
Moreover, no results of the model runs showing R^2, coefficients, nor
other statistical information are presented.

No rationale is offered for how different types of Federal programs
create jobs, either on-site or indirectly in other regions or
industries. Previous research, e.g., at the Urban Institute and the
EDA, indicates that employment effects may vary in accordance to
whether Federal assistance is used to promote investment in
infrastructure, encourage private capital expenditures, finance
procurement and administrative costs, or subsidize jobs. Moreover,
the use of State observations to measure economic variables, without
taking into account interregional or interindustry effects, precludes
the measurement of secondary or cumulative effects on the labor or
product markets which may extend beyond State boundaries. Thus the
suggestion (by GAO) that loan programs reduce contract construction
employment by shifting workers to other industries may not be tenable,
especially, when such model results are only attributed to low growth
in the construction industry during the 1974-78 period. Manufacturing
was also a low growth industry during this period, but the model
predicted large relative employment increases for the industry. Such
contradictions are not explained in the draft report.

The GAO model also fails to include as a separate explanatory variable
any measure of State economic development assistance; e.g., the level
of small issue industrial revenue bond (IRB) sales. IRB's may have
had a potentially important intervening influence on State-level
employment growth (net employment change or "new jobs" generated over
the 1974-78 period). In recent years, low-cost IRB financings of
commercial and industrial projects has been the fastest growing State
direct assistance program. Total annual issues of IRB's from 1975-79
have been estimated by the U.S. Congressional Budget Office (see:
U.S. Congress, "Small Issue Industrial Revenue Bonds," Congressional
Budget Office, Wash., D.C., April, 1981) to be $1.3 billion in 1975,
$1.5 billion in 1976, $2.3 billion in 1977, $3.5 billion in 1978, and
$7.1 billion in 1979 when, because of restrictive monetary policy, the
interest rate on conventional loans skyrocketed. Thus, State economic
development programs could have been a significant factor in
explaining "government-induced" employment growth, particularly in
1978 when the Congress increased the permissible size of IRB financed
projects from $5 to $10 million; and with urban development action
grant (UDAG) money committed to the project, from $10 to $20 million
per project. In the GAO sample of economic development programs,
Federal business and industrial assistance (in the form of grants,
direct loans, and guaranteed loans) over the 1969-78 period accounted
for a substantial proportion of total disbursements ($4.4 billion out
of $27.6 billion) and obligations. And, these are the kind of
projects that State IRB programs could have either replaced or
enhanced in generating new State-level employment--but, there is no
way to tell from the GAO model.

(2). Is it a fact that grants create more jobs than loan guarantees
and loan guarantees more than direct loans?

In trying to evaluate the effectiveness of Federal economic
development programs, the GAO selected a sample of programs that had
job creation, either direct or indirect, as one of their objectives.
The programs were classified according to whether they provided aid in
the form of grants, direct loans, or loan guarantees. The model
results seem to indicate that the total number of jobs created, in an
average State, varied according to the type of aid that was provided.
Given that the model fails to pick-up interregional effects, it is not
intuitively clear whether such comparisons are meaningful.

The total (direct and indirect) employment effects of Federal aid
programs depends upon how such aid is targeted to specific areas. As
GAO points out, one reason why grants were estimated to be most
stimulative of job creation is that most of the grant programs in
their analysis had a primary objective of job creation; for loans this
was not necessarily the case. Since economic development grants are
usually targeted to specific areas of a State, one would expect the
employment effects to be concentrated within the State. This may not
be the case for direct loans or loan guarantees. For example, about
66 percent of the value of disbursed loans in the GAO sample were from
REA. One of the functions of REA is to finance the construction of
power plants. In constructing power plants, only about one-quarter to
one-third of the labor is used directly, i.e., on-site. The remaining
labor is used in such activities as the manufacture of turbines and
other machinery. This indirect employment may be generated in various
manufacturing sites throughout the Nation. Since the GAO model
probably doesn't pick-up such indirect employment in the average
State, the estimated assistance per job via direct loans may be
grossly overstated.

It is also difficult to rationalize why loan guarantees would create
more jobs than a direct loan of the same size; presumably, recipients
of the latter are less likely to be able to find alternative funding
sources if turned down by the government programs. Moreover, it is
possible that the apparent estimated relations across programs (grants
vs direct loans vs loan guarantees) may not stand up to statistical
analysis; that is, the observed differences in job creation rates may
not be statistically significant. One cannot be sure without further
documentation.

(3) Among the various grant categories, are public works grants the
most cost-effective in creating jobs?

The GAO model results may be biased by the choice of programs selected
for analysis. GAO sets out to compare the cost effectiveness of
public works grants (primarily EDA grants) with other grants
(primarily HUD block grants for community development). EDA public
works grants are often targeted to specific local areas, with the
primary objective of promoting local job creation. On the other hand,
HUD block grants for community development are usually in the form of
matching grants for large scale urban development projects. In the
latter case, job creation may not be the primary objective since
moneys from the block grants may be spent not only for development but

also for the purchase of land and the financing of various real estate
transactions. Thus, one would expect that public works grants should
a priori be more effective in job creation than programs in which job
creation is of secondary importance (at least in the shortrun). And
as mentioned previously, it is possible that the apparent differences
in employment effects due to public works grants vis-a'-vis other
grants may not be statistically significant.

GAO Note: The Department of Agriculture's comments on a
          draft of this report were not received within
          the official comment period; however, we are
          including its comments and our response to those
          comments in this report.

[GAO COMMENT:

1. Technical details about the specification of the model are provided in the technical paper.

2. Additional analysis may show state IRB's have a significant effect. However, we did not attempt to analyze industrial revenue bonds (IRBs).

3. We have revised the report to point out that this analysis only addresses the job-creating objective of these programs.

4. While we selected the categories, the agencies provided us with the data, and we deferred to their judgment in placing their programs into our categories.

Economic Research Service Comments

1. The theoretical foundation, the rationale for various factors, and many other statistical results, such as coefficient estimates, are presented in the technical paper.

   Additional analysis many show state IRB's to have a significant effect. However, we did not attempt to analyze IRB's.

2. The revised report points out that the results do not imply that grants were more cost-effective than loans and loan quarantees because the cost to the federal government for each type of assistance is different.

3. In discussing the model's limitations, we point out that many of these programs have several objectives, but the model only focuses on the job-creation objective. The Subcommittee specifically asked us to compare public works grant programs with other programs in terms of job creation. The differences in the estimates presented here (in table 4) are statistically significant; however, the statistical tests we used are discussed in the technical paper not this report.]

JAMES L. OBERSTAR
8TH DISTRICT, MINNESOTA

COMMITTEES
PUBLIC WORKS AND
TRANSPORTATION

CHAIRMAN
SUBCOMMITTEE ON ECONOMIC
DEVELOPMENT

MERCHANT MARINE AND
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Congress of the United States
House of Representatives
Washington, D.C. 20515

January 26, 1982

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Honorable Charles Bowsher
Comptroller General of
   the United States
General Accounting Office
441 G Street, N.W.
Washington, D. C.   20548

Dear Mr. Bowsher:

It has come to my attention that although various studies
have been completed on federal economic development programs
such as the business and industrial loan programs of FmHA
and SBA's and EDA's loan and loan guarantee programs, dif-
ferent standards are used in these studies, and it is diffi-
cult to assess their overall impact and the return on the
federal investment. Therefore, it would be helpful if your
office could develop a common methodology to evaluate these
programs as to the job impact, direct and indirect, and the
overall increase in tax revenues on the local, state or
federal levels.

In addition, I would appreciate a review of the public works
grant program and its comparison with the other economic
development grant programs in terms of jobs created and its
impact in generating investment and development.

These studies would be most beneficial to the Economic
Development Subcommittee as we prepare legislation in this
session of Congress.

                              Sincerely,

                              James L. Oberstar
                              Chairman, Subcommittee
                                 on Economic Development

(972402)

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