



EDA RLFs

Planning, Local Structural Change, and Overall Performance

2002

**Rutgers, The State University of New Jersey
Edward J. Bloustein School of Planning and Public Policy
Center for Urban Policy Research (CUPR)**

Economic Modeling Specialists Incorporated (EMSI)

New Jersey Institute of Technology

The Epling Corporation



**Economic Development Administration
U.S. Department of Commerce**

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Larger Study Availability

The three reports undertaken for EDA and summarized here are:

1. *The Impact of Planning on EDA RLF Performance*
2. *The Impact of EDA RLF Loans on Economic Restructuring*
3. *EDA RLFs—Performance Evaluation*

These volumes are available from:

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Foreword

A Message from EDA Assistant Secretary David A. Sampson

I believe economic development is of critical importance because it supports two important public policy objectives: creating wealth and minimizing poverty. The public-sector role is to foster a positive environment wherein the private sector will risk capital investment to produce goods and services and increase productivity, thereby providing the higher-skill, higher-wage jobs that offer opportunity to all Americans.

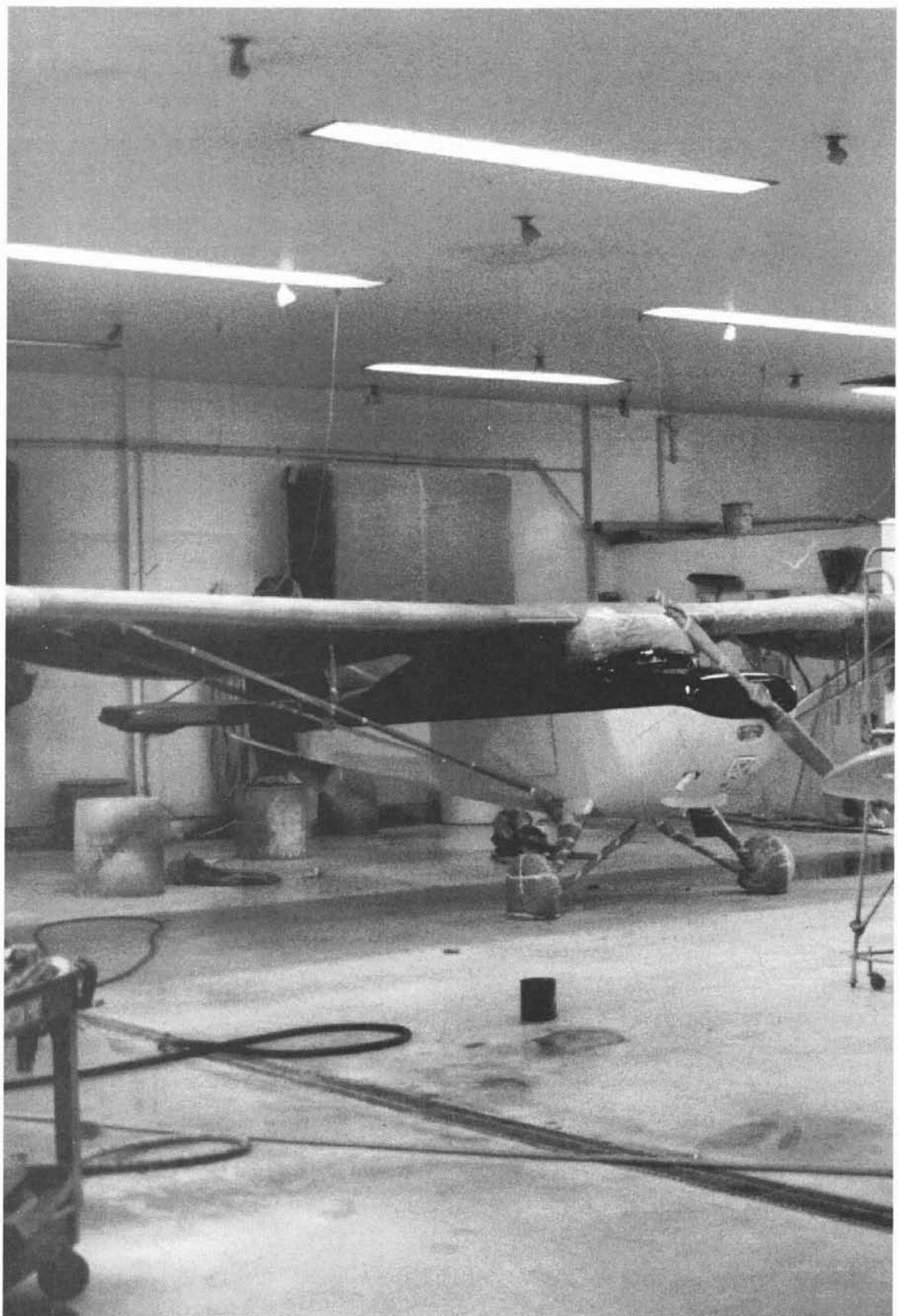
However, there are situations when the private sector, such as traditional lending establishments, still will not risk capital, for instance, by lending funds to start or expand businesses to prospective borrowers who may have a good business plan but lack sufficient collateral or experience. In some cases, the public sector may be able to provide the crucial capital. EDA does this through its Revolving Loan Fund (RLF) Program.

The purpose of EDA's RLFs is to provide economically distressed communities with a flexible and continuing source of capital, to be used with other economic development tools, for inducing private investment in the types of business activities that will contribute to long-term economic stability and growth. Grants to capitalize or recapitalize an RLF are awarded to local governments, regional development organizations, and states to be used in conjunction with other business development tools, to support implementation of economic adjustment and defense conversion strategies. RLF financing is expected to be strategically targeted to those industrial sectors, types of businesses, and specific investments that, individually and collectively over time, will increase the competitiveness of local industries and individual businesses and strengthen the economic base. RLFs should also focus on results. As President Bush has said, "What matters in the end is completion. Performance. Results. Not just making promises, but making good on promises." The focus of RLFs should be on job creation that leads to minimizing poverty and increasing wealth.

Targets of the RLF financing are identified in the area's comprehensive economic development strategy (CEDS), which the financial investments are required to support. The CEDS process is designed to guide the economic growth of an area through an inclusive and dynamic process that coordinates the efforts of community organizations, local governments, and private industry concerned with economic development. Fundamental to the success of the CEDS process is the development of strategies that focus on the community's unique strengths that are market-based and can leverage public, private, and community resources.

Comprehensive market-based local and regional planning is essential to creating a positive environment and fostering successful economic development. Effective planning creates a road map for communities to grow and develop with a focused approach toward creating higher-skill, higher-wage jobs.

DAVID A. SAMPSON
ASSISTANT SECRETARY
FOR ECONOMIC DEVELOPMENT



I. Overview and Findings

In FY 1998, the Economic Development Administration (EDA) commissioned an evaluation of its Revolving Loan Fund (RLF) program to determine the extent to which EDA RLF grants achieve structural economic adjustment in the target area. This was the most comprehensive study of RLFs ever undertaken. It involved 450 grantees who issued close to 12,000 loans totaling over \$670 million.

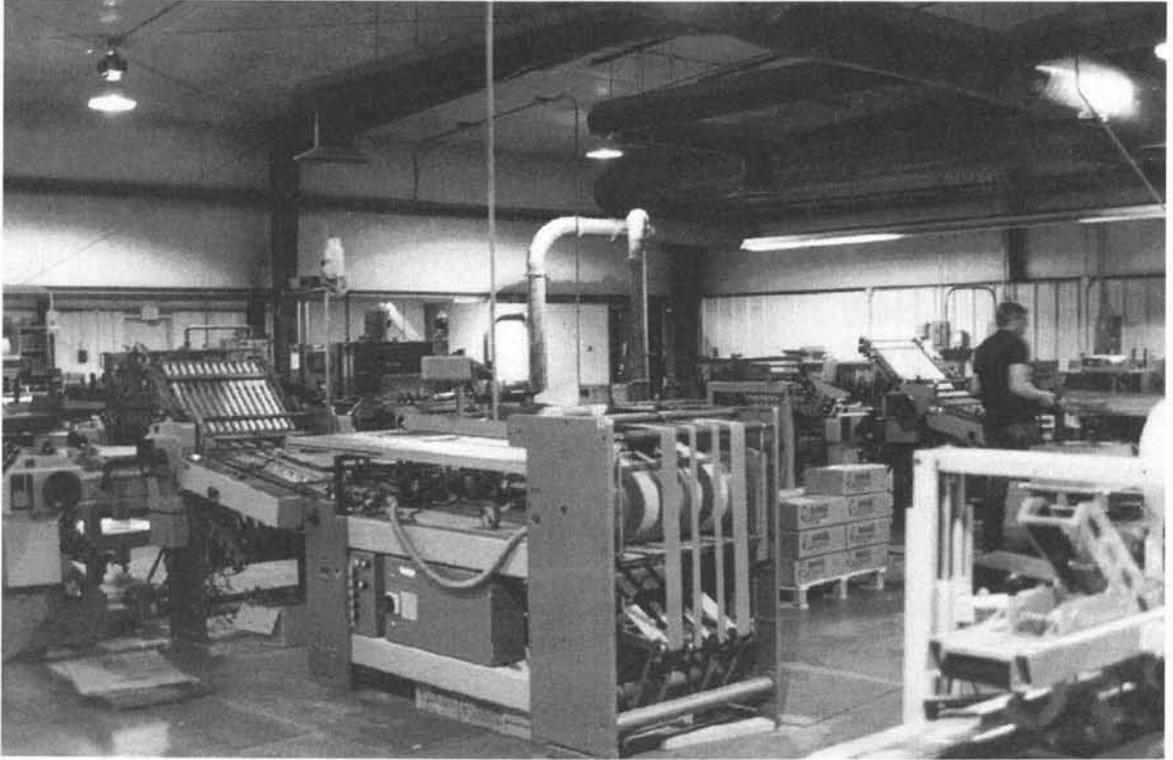
The study was undertaken and delivered by the Rutgers University Center for Urban Policy Research (CUPR) and involved participation by Economic Modeling Specialists Inc. (EMSI), the New Jersey Institute of Technology (NJIT), and The Epling Corporation (TEC). These four organizations prepared three reports totaling close to 950 pages:

1. *The Impact of Planning on EDA RLF Performance*
2. *The Impact of EDA RLF Loans on Economic Restructuring*
3. *EDA RLFs—Performance Evaluation*

The reports were delivered in May 2002 and produced the following general findings.

1. EDA RLFs and other agencies' economic development programs depend on EDA planning to structure their operational activities.
2. EDA's Comprehensive Economic Development Strategy (CEDS) provides the overall direction and theme of economic development for an area.
3. EDA's Revolving Loan Fund Plan sets targets of achievement for lending and provides operational guidelines for reaching these targets.
4. Revolving Loan Funds that take their directions from current and coordinated CEDS and RLF plans are more likely to achieve economic restructuring and to perform effectively and efficiently.
5. The average RLF in the average county achieves economic restructuring. This means that loans in this county help to achieve some combination of economic diversification, increased worker wages, a more advanced economic stage, and reduced dependence on regional imports.
6. RLFs are more effective in economic restructuring when the number and amount of loans given are large and the areas (counties) in which they are given are relatively small.
7. EDA RLFs more often achieve economic diversification and a reduction in regional imports than higher wages or a more advanced stage of economic development.
8. EDA's achievement of economic restructuring can occur despite reduced wages or deferred advancement of the economy. This is because other planning goals of economic development may require the development of retail or service establishments whose wage scale or level of sophistication retard overall economic restructuring. Furthermore, multiplier-effect jobs are unavoidably often in low-wage, low-stage industries.
9. EDA RLFs are up and running and produce jobs in 98 percent of the cases. EDA RLFs leverage private investment also in 98 percent of the cases.
10. Counties with EDA RLFs have unemployment rates 10 percent higher and per capita income 10 percent lower than state and national averages.
11. EDA RLFs are fully disbursed in 3.5 years and leverage private-sector investment at a ratio of slightly over two to one.

(Left) Grantee: The Lending Network. Custom Aircraft Painting, Inc., was a one-man operation before a \$100,000 RLF loan allowed its owner to build this facility and to create three new jobs. The facility is located in an industrial park in Kelso, WA, just north of Portland, OR. Custom Aircraft Painting, Inc., paints private and corporate aircraft. Its customer base is nationwide. The RLF loan leveraged \$160,000, including \$60,000 in owner's equity.



Grantee: Purchase Area Development District. Kendor Wood, Inc., manufactures a variety of doors, cabinets, and related wood products for a market area that includes all states east of the Mississippi. Since receiving a \$100,000 RLF loan in 1983, Kendor has grown from 14 to 65 employees, a net increase of 51 new jobs.

12. EDA RLFs produce an average of eight jobs per loan. This is 1 1/3 times the size of the original employment base if the loan involves expansion.
13. The RLF program produces jobs at a cost to EDA of \$936 each by offering loans averaging 1.25 percent below prime.
14. These jobs go to minority and female workers at a ratio of about one in five and produce minority and female owners at ratios of one in 50 and one in 15, respectively.
15. EDA RLFs have a default/write-off rate of 8.6 percent and on average expand the loan pool at 1.1 percent annually. In a decade, loan pool growth exceeds loan pool losses by a ratio of 1.04.

What is absolutely clear from the studies undertaken by the Rutgers University consortium is that the EDA RLF program produces permanent jobs in economi-

cally distressed areas, with great regularity, and at low cost. These jobs are created by loans to new or expanded businesses that, absent EDA's intervention, would be unable to secure such funding. Thus, EDA RLF loans diversify the local economy and reduce the necessity for regional imports. This an effective program that achieves its objectives at both low cost and very low rates of failure. The EDA RLF program is a model of low-bureaucracy, high-payoff economic development. It is a highly efficient vehicle to revive local economies hit by long-term or sudden negative economic change.

II. Introduction

In March 2001, the nation's longest period of sustained economic growth—exactly 10 years—came to an end. The U.S. workforce was the largest in the

nation's history, and the unemployment rate had reached a 31-year low. By March 2001, the United States had entered a recessionary period, and the events of September 11 contributed to a near free fall in the economy that continued through the end of the year.

Even during stable times, however, there are communities that meet EDA's distress criteria—in which the local unemployment rate is at least one percentage point higher than the U.S. unemployment rate and local per capita income is 80 percent or less of national per capita income. Such areas may be characterized by population loss and are often stagnant or in economic decline. Generally speaking, banks do not grant loans to businesses in these areas because the businesses have insufficient collateral, a checkered history, or a lack of experience. This is the loan environment in which EDA RLFs operate. Through the EDA RLF program, loans are given to businesses located in areas of significant economic decline or disruption. If the RLF loans were not available to those businesses, their employees might be either unemployed, or underemployed in the same or in another sector.

III. Background

An RLF is a pool of money for making capital available in distressed communities. Each fund, which is managed by a grantee, is distributed in the form of loans to area businesses. The fund is replenished by loan repayments, including interest. The initial loan pool includes the EDA grant (usually 75 percent of the total pool) and funds collected from non-EDA sources that represent the grantee's share (usually 25 percent of the loan pool). Loans given from the loan pool are combined with private money and other public money to form an overall financing package that is three times the EDA/grantee component.

In 1965, the Public Works and Economic Development Act (PWEDA) authorized most of EDA's present grant programs. The RLF program was added under Title IX in 1974. In 1998, the EDA Reform Act reauthorized EDA's programs for five years without altering the agency's mission. In the 1998 Act, RLFs are authorized through the EDA Section 209 Economic Adjustment Program. Under that authorization, an RLF is defined as a capitalized fund making loans for small-business projects in accordance with local economic development strategies.

To be eligible for an EDA RLF grant, an applicant must meet one of the following three distress criteria: Unemployment in the application's area must be 1 percentage point higher than the national average; per capita income must be less than 80 percent of the national average; or there must be a special need such as a natural disaster or military base closure. Grantees must comply with local laws, not discriminate, administer grants prudently, and submit regular status reports. Many of these were LTED and SSED RLF requirements before 1998.

Finally, the grantee must certify on an annual basis that loans are in accordance with an RLF plan (a technical document analogous to a business plan) and that the RLF plan supports the CEDS (a general guide to



Grantee: Androscoggin Valley Council of Governments. Bachman Industries is located in Auburn, ME. It received a \$15,000 RLF expansion loan that leveraged \$1.5 million of private-sector investment. This loan created 50 additional jobs.

promoting sustainable economic development and employment growth in an area).

The CEDS

The locality's CEDS must be included or incorporated directly by reference in an application for an RLF grant. Further, the CEDS must be the result of a continuing local economic development process. It must identify past and present problems and propose future economic development investments; identify private and public participants; describe how problems can be addressed in a way that fosters economic opportunity, transportation access, and environmental sensitivity; and indicate how the proposed economic development strategies can be used to ameliorate the local economic distress.

The RLF Plan

The RLF plan is less comprehensive than the CEDS, but it must be consistent with that economic adjustment strategy. It describes the business and operating strategies that the grantee will use to administer the RLF. The business strategies include the financing strategy and the implementation policies to be used; portfolio standards and targets; loan selection crite-

ria; and performance assessment practices. The operating strategies include procedures related to loan processing, closure, disbursement, and servicing.

IV. Planning and RLFs

Loan-Applicant Problems

The most common problem facing inexperienced loan applicants is that banks will not lend money to them. Banks have limited ability to adjust their rates to accommodate risk; when risk is encountered by these lending institutions, they respond by not granting loans. The typical RLF loan is given to a below-average-income applicant in an area of high unemployment who can commit little capital to the proposed venture. Often, an RLF is recommended to loan applicants by banks that will not provide loans to them.

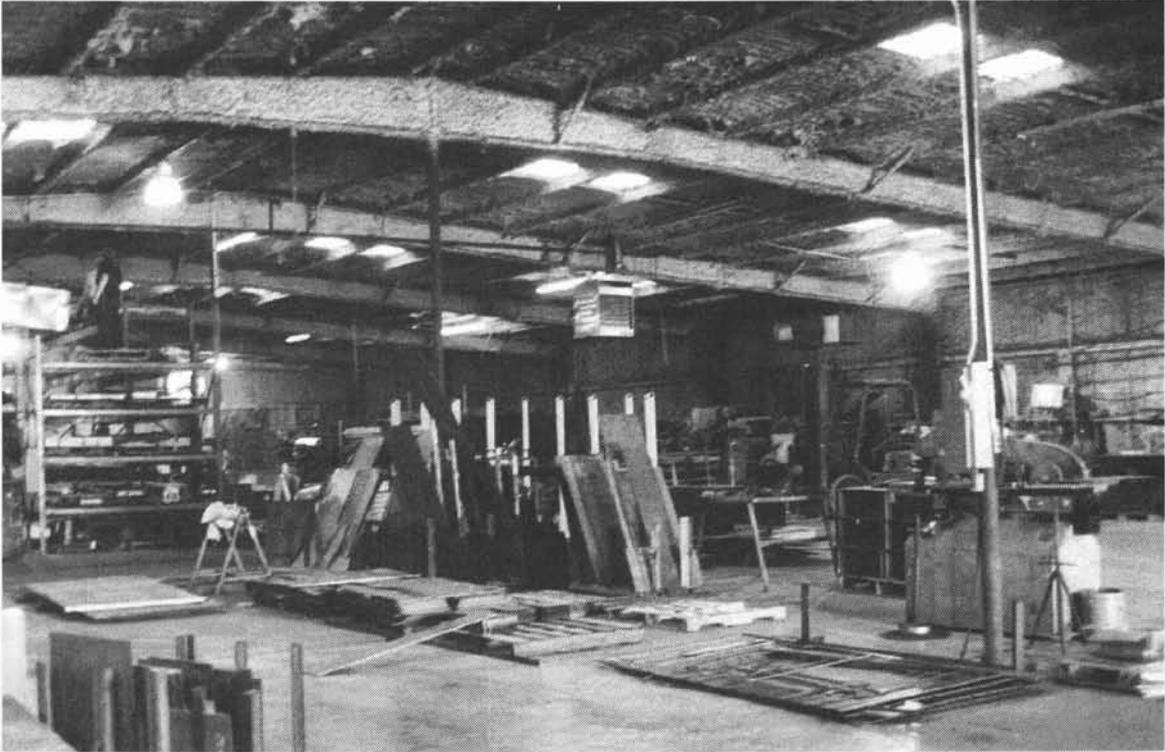
Other problems facing business-loan applicants are (1) inadequate labor forces caused by intra- and intermetropolitan employment and household losses and (2) basic infrastructure and public-service inadequacies in the localities in which applicants plan to start their new businesses.

The Role of Planning

The CEDS provides an overall strategy within which an RLF operates; the RLF plan provides criteria upon which to gauge success. The CEDS developed for an area should articulate the strategy for structural economic change. It must then set forth a series of steps to address the economic development problems by using local economic development actors; it must also invoke a series of measures to evaluate progress on alleviating the economic development problem. The RLF plan is supposed to implement the CEDS and foster development of economic sectors desired by



Grantee: North Central Planning Commission. Located in Rolla, ND, the Rolla Seed Company cleans grain to a certified level, giving it added value by reselling the grain as certified seed. In 1996, the company received a \$35,000 RLF expansion loan that leveraged \$35,000 in private funding and \$7,000 in new equity. An additional 2.5 jobs were created.



Grantee: North Delta Planning and Development District. Aluminium Extrusions, Inc., got started with an RLF loan of \$75,000 in 1992, which leveraged \$450,000 in other public funds and \$715,000 in owner's equity, for a total project cost of \$1.24 million. This EDA investment resulted in the creation of 90 jobs, 45 of which are filled by minority employees.

the strategy. The plan helps grantees lend to emerging entrepreneurs and minimizes loan defaults by requiring standard operating procedures and performance benchmarks of loan applicants. The technically oriented RLF plan ensures that the loan is implemented in accordance with the CEDS, yet it does so in a way that follows acceptable accounting and financial procedures. The RLF loan must achieve the goals of the CEDS within the operational framework of the RLF plan.

Planning in a Changing Environment

Observations from the field indicate that the loan environment is changing, and that RLF loans are changing to reflect the new environment. How does planning at each of the aforementioned levels adjust to accommodate these changes? *At the CEDS level, there is little significant change, even on a multiyear basis.* The CEDS is sufficiently general and anticipa-

tory of changes in long-term economic circumstances to remain relatively current. *On the other hand, at the RLF plan level, change is needed and often takes place.* The RLF plan is updated for such reasons as allowing a greater share of loans for a particular purpose, lowering required private-sector leverage ratios, or lowering mandatory 50 percent participation levels by the applicant or others. In addition, individual benchmarks of default and repayment may be adjusted to reflect better or worse economic times.

Planning and Structural Change

Planning is important to the RLF process. It is important at a macro level (the CEDS) because it ensures that the broad range of implemented economic development activities are directed to stated ends, such as economic restructuring. Planning is further important at the macro level because the goals of economic restructuring may be in conflict with other

goals, and the CEDS can prioritize these efforts. Planning is critical to economic restructuring.

Planning and RLF Performance

Planning is important at the micro level (the RLF plan) because it ensures that financial best practices are being used. As a result, default/write-off rates are low and the capital base grows. At the micro level, planning ensures that loans are offered to a deserving clientele and that procedures are in place to oversee loans. The RLF plan sets a frame for making and monitoring loans.

The Role of EDA

EDA is a government agency that values and encourages local and regional planning. All grants must be in accordance with a comprehensive strategy of economic regeneration. Planning is important to setting

both the framework (CEDS) and the objectives (RLF plan) for economic progress. Sustained and coordinated economic development would flounder without this type of planning. Other public agencies look to EDA to put a strategy of economic development in place. This type of strategy aids the RLF by ensuring that its activities support the general theme of economic restructuring. The strategy is also important to RLF portfolio performance because it targets recipients of loans and provides procedures and guides with which to view loan performance.

V. EDA RLFs and Structural Change

RLF loans provide capital for investment in private-sector plants and equipment; through these investments, new permanent jobs are created and existing



The RLF loan officer (standing at the far left in the picture) talks with the owner of S. J. Morse. "The RLF loan made the total package come together," the owner states. The loan allowed S. J. Morse to upgrade its equipment and occupy larger quarters.



Peace Textile America, Inc. received an RLF loan of \$200,000 in 1997. The loan leveraged \$1.78 million in private-sector investment and \$245,000 in other public funds. The loan created 40 new jobs, adding to the 88 pre-loan jobs. The company, owned by a Korean, has been very successful where some other textile plants in the region have struggled or left the area.

jobs are retained. New or retained direct jobs, in turn, create indirect jobs in the local (county) economy. The sum of these is total jobs. An increase in total jobs can advance an economy. Do these RLF loans, through the creation of various types and levels of new employment, move areas to a more high-tech, diverse, or stabilized economy?

To view economic structural change four measures are used—all quantifiable. These measures interpret forces that create an increasingly sophisticated and technical regional economy. The first measure, *economic diversification*, is associated with increased competitiveness and stability and thereby contributes to structural change. The second measure, an increase in *earnings per worker*, enhances individual well-being and often fosters a positive change in economic structure. The third measure views the progression of *economic stages*—movement from more basic to

more skilled industries—as indicative of positive structural change. A final measure correlates investment that results in reduced *import dependence* with positive economic structural change.

The study utilizes an extensive database of EDA RLF activity, encompassing the roughly 11,600 loans made during the 23-year period from 1976 to 1999 in approximately one-third (1,032) of all U.S. counties. The database was assembled by researchers at Rutgers University's Center for Urban Policy Research (CUPR) from reports submitted to EDA regional offices by RLF grant recipients. The CUPR-EDA database includes recipient estimates of the jobs created or retained as a result of RLF loans. These job estimates appear with sector detail at the Standard Industrial Classification (SIC) four-digit level.

Jobs created or retained through RLF loans, along with an estimate of indirect or multiplier effects, pro-

vide the raw input for evaluating the impact of RLF loans on structural change. This is a conservative measure of structural change; often, multiplier-effect jobs involve the lower sectors and wages and actually inhibit positive structural change progression.

A single "composite index" of regional economic structure is calculated, based on the four measures of structural change mentioned above: *economic diversification, earnings per worker, economic stage, and import dependence*. The composite index is first calculated for each of the 1,032 counties where there is RLF loan activity, using existing economic conditions. The index is then calculated a second time, based on a simulation of economic conditions without the jobs created or retained by the EDA RLF loans. An evaluation of the impacts of EDA RLF loans on economic structural change is based on a comparison of the two indices, the one with (after) and the other without (before) the EDA RLF loans. If the standardized composite change is positive and of a certain specified magnitude, positive change has taken place; if it is negative and again of a specified magnitude, negative change has taken place. If change does not exceed a certain magnitude in either direction, no change or indeterminate change has taken place. The point of the analysis is that a positive change in the composite index signals a posi-



CrownLine Boats, Inc. is located in West Frankfort, IL. The company received an initial \$104,000 RLF loan and two additional loans for working capital (\$46,000 and \$73,000). These three loans combined leveraged \$2.87 million of private funding, \$1.2 million of other public funding, and \$31,200 of new equity. At the time of the first loan (1993), the company employed 200 people. Currently this number has increased to 540.

tive change in regional economic structure. The opposite is true for a negative change. Many of the individual counties exhibit changes that are very small, however, and their significance as indicators of structural change is doubtful.

Positive Economic Structural Change

According to the changes indicated in the composite index and the level of significance set for this study, EDA RLF loans create positive economic structural change in 42 percent of the counties where they are made (Table 1).

Indeterminate Economic Structural Change

There is either no effect or an indeterminate effect in 46 percent of the counties with RLF activity (Table 1). An examination of the counties in the indeterminate category shows that they, not surprisingly, tend to be larger in total population and jobs (roughly three to five times larger in jobs) than the typical county showing a significant index change. The percentage change in total jobs brought about by RLF loans is less than 0.2 percent in indeterminate counties, compared to 3 percent to 4 percent for counties with a significant composite index change.

Total RLF loan amounts, number of loans, and total all-source loan amounts tend to be substantially lower than average in counties with an indeterminate change in the composite index. The conclusion is that where RLF and other loan activity is limited and the county job base is reasonably significant, the impact of loans on economic structural change is likely to be too small to be measurable.

Negative Economic Structural Change

In 12 percent of the counties with RLF loan activity, there is an apparent negative change in economic structure as measured by the composite index

Table 1
Economic Structural Analysis in Standardized Scores
for the Average County and Incidence in Counties Overall

Incidence of Structural Change in Counties Overall				
	Positive Composite Index	No Effect	Negative Composite Index	Total
Number of Counties	431	478	123	1,032
% of Counties	42	46	12	100

Economic Structural Change in the Average County					
	Before	After	$\Delta\%$	Δ STD%	
Economic Diversification Index	3.780	3.790	0.27%	0.41	pos
Earnings per Worker Index (\$1,000)	\$27.07	\$26.99	-0.29%	-0.20	neg
Economic Stage Index	4.347	4.342	-0.10%	-0.12	ind
Import Dependence Index*	29.56%	29.52%	0.13%	0.18	ind
Composite Index	—	—	—	0.27	pos

Note: * The sign of the import-dependence index is reversed, so a positive index change will indicate a positive economic structural change

pos = positive economic structural change

neg = negative economic structural change

ind = indeterminate economic structural change

Source: Rutgers University CUPR-EDA RLF Database 2000

(Table 1). This is not to be confused with economic deterioration. These counties have increased their job base due to RLF loans, but in doing so may have decreased earnings per worker, increased import dependency, limited local economic diversification, or contributed to a reverse progression of the economy in terms of economic stage. A new retailer or restaurant obtaining start-up funding from an RLF loan, while good for an area and profitable, may not advance the objectives of economic restructuring. This is not necessarily a negative outcome, but rather a realistic result of multipurpose economic development.

Economic Structural Change by Type of Change

Economic Diversification. The average diversification index for the 1,032 counties with RLF loan ac-

tivity is 3.790. Absent the RLF loans, this average would be 3.780. RLF loans positively increase county diversification indices by 0.01, or 0.27 percent—above the 0.25 percent set for significance (Table 1).

Earnings per Worker. The average earnings-per-worker index for the 1,032 counties with RLF loan activity is \$26,990. Without the RLF loan activity, the index is \$27,070—a negative significant decrease of \$80, or 0.29 percent (Table 1).

Economic Stage. The average economic stage index for the 1,032 counties with RLF loan activity is 4.342. Without the RLF loan activity, the index is 4.347—a negative change of 0.005, or roughly 0.10 percent (Table 1).

Import Dependence. The average import dependence index for the 1,032 counties with RLF loan activity is 29.52 percent. Without RLF loan activity, it is

Table 2
The Context of EDA RLF Projects at Time of Application
(450 Grantee Sites (Counties))

Context Variable	Median	Median Ratio to State	Median Ratio to Nation
Per Capita Income	\$12,881	0.9	0.9
Below Poverty Level	14.4%	1.1	1.1
Minority	8.5%	0.8	0.4
Unemployment Rate	7.8%	1.1	1.1

Sources: EDA RLF Semiannual Reports, October 1998, and U.S. Census of Population and Housing 1990.

29.56 percent. It has decreased its dependence by 0.04 of a percentage point, or 0.18 percent (Table 1).

Composite Index Overall. Summing the standardized percentage change in the four indices leads to a positive percentage change of 0.27 percent. Thus, RLF loans create positive economic structural change at a magnitude of 0.27 percent, on average nationwide, in counties where they occur (Table 1).

VI. The Performance of RLFs

The performance analysis of RLF loans is a direct result of the massive amount of data collection and analysis necessary to answer the basic research questions regarding economic restructuring.

The Context of RLF Loans

RLF loans take place in counties where the median per capita income is 90 percent of the state and federal medians. In current dollars, median per capita income is approximately \$12,881 in counties with RLF grantee sites (Table 2).

RLF loans take place in locations in which the share of the population with incomes below the poverty level is 10 percent higher than the state and/or na-

tional medians. At RLF sites, the percentage of the population with incomes below poverty is at a median level of 14.4 percent (Table 2).

RLF loans take place in locations in which the proportion of minority populations is at the statewide median and significantly (60 percent) below the national median. Nationwide, the median percentage of minority populations at RLF sites is approximately 8.5 percent (Table 2).

RLF loans take place in locations where the unemployment rate is 10 percent higher than state and national averages. The average unemployment rate at RLF sites is 7.8 percent (Table 2).

RLF Characteristics

Close to one-half of the 11,600 RLF loans, as of October 1998, were made in the Philadelphia and Seattle regions. That amounts to 48 percent or approximately 5,500 loans (Table 3). The largest proportion of RLF loans are granted for expansion (55 percent, or approximately 6,300 loans) as opposed to start-up or retention purposes and are given to manufacturing (49 percent, or approximately 5,700 loans) as opposed to commercial or service businesses. Seventy-two percent (or approximately 8,300) of the loans were granted as part of the Long-Term Economic Deterioration (LTED) program and 73 percent, or approxi-

Table 3
RLF Characteristics

Characteristic	Largest Distribution of Loans	Percentage of All Loans (%)	Number of Loans
Location	Philadelphia and Seattle	48	5,500
Purpose	Expansion	55	6,300
Type	Manufacturing	49	5,700
Program	LTED	72	8,300
Year	Mid- to late- 1980s or 1990s	73	8,450

Source: EDA RLF Semiannual Reports, October 1998.

Table 4
Calculating Leverage Ratio

Loan Information	Median
RLF Loan Amount	\$56,601
Total Loan Amount	\$176,319
Leveraging Ratio	2.12 to 1

Source: EDA RLF Semiannual Reports, October 1998.

mately 8,450 loans, were made either during the mid- to late-1980s or during the mid- to late-1990s, as opposed to earlier periods in each of those decades or before 1980.

RLF and Total Loan Amounts and Leverage Ratios

The median RLF loan issued by EDA grantees is approximately \$56,600. This is the amount of money that the loan recipient receives from the EDA grantee. Often that amount is packaged with other private and public moneys to provide a total amount of money that the loan recipient uses to undertake or sustain a business venture. The median of this total financing package is approximately \$176,320. The relationship between the non-RLF and RLF portions of the moneys accessed by the loan recipient is the leverage ratio. If the median amounts are used, this figure is approximately 2 to 1 (Table 4).

Loan Pool and Disbursement

Of the 422 RLF grantees reporting, 414, or 98 percent, established a loan pool. The remaining 8 grantees returned most or all of the grant to EDA. Of the 414 grantees that established a loan pool, all of them, or 98 percent of the 422 original grantees, reported that their loan pool helped their areas create or retain permanent jobs (Table 5).

EDA would like the grantee to disburse loans during the first three years after receipt of EDA funding. Currently, grantees are taking a median of 3.5 years from the time of receipt of funding from EDA, or 3.5 years from the time of issuance of their first loan.

Preloan Jobs, Jobs Created/Saved, and Cost per Job

RLF loans are made to small businesses for start-up, retention, or expansion purposes. In the last two cat-



Located in Buckfield, ME, Maine Apple Growers received a \$72,000 retention loan that created 19 additional jobs and saved 14 existing jobs.

Table 5
Loan Pools and Disbursement Schedule

Administrative Information	Number of Loan Pools	Percentage of Total (N=422)
Loan Pool Up and Running	414	98.0
Loan Pool Helped Create Jobs	414	98.0
Time to Loan Disbursement	Median Number of Years	
Years from Initial Disbursement	3.5	
Years from First Loan	3.5	

Source: EDA RLF Semiannual Reports, October 1998.

egories, the median number of preloan employees is about six (Table 6).

After the RLF loan is received, the median number of new employees added is eight. In other words, as a direct result of the RLF loan, the average employment at a site more than doubles. For every preexisting employee, RLF loans create 1.33 new jobs.

EDA cost per job created or saved is calculated at the grantee level as of October 1998. The cost of the RLF program at the grantee level is the sum of the RLF grant and the opportunity cost of disbursing the grant minus the current capital base, which includes repaid and committed RLF funds not yet disbursed, RLF funds reserved for loan guarantees, and the outstanding RLF principal on the active loans. At the grantee level, the cost per job is the total cost of the EDA program divided by the number of jobs created or retained by the loan recipients. The annual interest rate charged is the average 30-year federal Treasury bill rate for the year in which EDA funds were given. The EDA share of the total RLF grant is approximately 75 percent. The median EDA cost per job is about \$936 as of October 1998.

Loan Terms

The median interest rate charged to RLF loan recipients during the period from the late-1970s through the late-1990s was approximately 7.5 percent. The

rate varied from a peak of 10 percent during the mid-to late-1970s to a low of 6 percent during the early 1990s (Table 7). The interest rate of 7.5 percent for the period was approximately 1.25 percent below the prime rate for the same period: the percentage below prime varied from a high of 5.75 percent during the late-1970s to a low of 0.15 percent during the early 1990s.

Performance of Loans

Loans for which a payment has not been made for more than two months are in default. Others with six or more months of nonpayment are written off. The mean rate of default/write-off for EDA RLF loans is 8.6 percent (Table 8). This is only about 5.6 percentage points higher than the default rate of standard commercial mortgages (3 percent). That is a remark-



The co-owner of Speedee Oil Change and Tuneup stands with the RLF loan officer (left) in front of the refurbished auto oil and repair facility in Charleston. The \$70,000 RLF loan saved nine jobs and created four new jobs.



Image Graphics, Inc. is a printing firm serving an international market. Since receiving an RLF loan, its gross sales have increased from approximately \$14,000 per month to \$1 million per month. The firm has grown from 20 to 45 employees, a net increase of 25 new jobs.

able figure since most of the EDA RLF loan recipients were turned down by commercial banks or mortgage companies or never applied for a loan because they knew they would be turned down.

Another measure of loan performance is growth of the loan pool. In other words, is the money fund increasing over time? The definition of fund composition is principal and interest repayments minus bad debt. On average, the loan pool grows in simple terms (not compounded) at a rate of 1.1 percent per year. In 10 years the loan pool is 11 percent larger than it had been at its beginning (Table 8).

A final measure of performance involves decade growth divided by the default/write-off rate. A figure greater than one is better than a figure less than one. Overall, the combined measure is 1.04, which means decade growth of the RLF loan pool is greater than its losses over the same period (Table 8). A decade is chosen because it represents the approximate period by which an RLF is fully mature and ready for re-capitalization.

Employment and Ownership Diversity

On average, EDA RLF loans produce employment that is 17 percent minority (African American, Asian, Hispanic, Native American) and 20 percent women

Table 6
Jobs Created/Saved and Cost Per Job

Job Information	Median
Preloan Jobs(excluding start-ups)	6.0
Jobs Created/Saved	8.0
Cost per Job	\$936

Source: EDA RLF Semiannual Reports, October 1998.

Table 7
Interest Rate Charged

	Median	Range Over Time
Loan and Interest Rate	7.50%	6.0%–10.0%
Percentage below Prime	1.25%	0.15%–5.75%

Source: EDA RLF Semiannual Reports, October 1998.

Table 8
Loan Performance

Default/Write-Off Rate (mean)	8.6%
Decade Loan Pool Growth (median)	11.0%
Combined Measure (median)	1.04

Source: EDA RLF Semiannual Reports, October 1998.

(Table 9). These two figures overlap and therefore are not additive.

Further, EDA RLF loans produce businesses that in 2.1 percent of the cases are owned (more than 50 percent) by minorities and in 7.1 percent of the cases are owned by women.

VII. Conclusion

An RLF is one of the most effective tools available to economic development agencies in their efforts to

Table 9
Employment and Ownership Diversity

	Median
Employment	
Minority	17.0 %
Women	20.0 %
Ownership	
Minority	2.1 %
Women	7.1 %

Source: EDA RLF Semiannual Reports, October 1998.

directly affect the long-term economic vitality of an area by creating businesses that diversify, and fill gaps in, the local economy. An RLF is the only tool available to many economic development agencies that provide financial assistance directly to the business community. The program creates public-private networks and public-private partnerships that often become a “revolving fund of opportunities” to further economic development.

EDA RLF loans enable businesses to prosper that would not have prospered under conventional lending guidelines. The program is successful in almost every instance that a loan is given, and it produces jobs at relatively low costs to the taxpayer. The program further provides employment access to minorities and females at ratios of about one in five each and provides ownership access to minorities and females at ratios of one in 50 and one in 15, respectively. The EDA RLF program achieves its intended results with high levels of accomplishment and low levels of risk and cost.

VIII. Retrospect: The Studies in Context

It should be understood that before this analysis was undertaken, there was a dearth of knowledge about what constituted economic structural change let alone the EDA RLF program’s contribution to it. There was

some recognition that structural change involved (1) individuals raising their annual wage; (2) areas becoming more diversified in their employment offerings; (3) a general movement to products or services that require increased amounts of education and technical proficiency to deliver; and (4) an ability to draw upon a more complex array of goods and services and thus reduce the importation of these services. Yet, these dynamics had not been brought together in a coherent fashion to describe structural change, nor had any attempt been made to quantify them. In addition, since they had not been combined, there was no effort to view their interactive effects and thus no need to normalize their scales or ranges. Finally, there was no attempt to analyze thresholds and directions of effects to determine both the significance and sign of their impacts. This study employs all of these components to determine the impacts of the EDA RLF program on economic structural change.

Further, there was little information on the types of businesses RLFs assisted and how well they were doing. Were these loans being made to marginal players who contributed little in job generation, had high rates of failure, and cost the government a significant amount of money, or had the government (EDA) found an unserved niche market of underfinanced entrepreneurs who, once given a loan, could create successful businesses as well as advance the local economy? Clearly, the latter has been the case, but this was undocumented before these data were assembled and analyzed. Basic RLF performance bears on the larger issue of economic structural change; if RLFs are not successful, their contribution to economic structural change is not realized.

Finally, how did RLF impacts come about? Was it by chance or was it due to a planning mechanism that already was in place? If the latter, what was this planning mechanism, and how did it work? Again, before this study, there was no way to draw conclusions about



The owner of the Caribbean Pepper Pot restaurant stands in front of his new establishment talking with the RLF loan officer (right). The restaurant offers an exciting new cuisine to Sumter residents, and, by adding a new attraction to downtown and restoring the building, the loan is helping to redevelop downtown Sumter.

the impact of EDA planning on RLFs. There needed to be a field study to speak to people at local RLF offices to determine whether their EDA-funded CEDS and RLF Plans were current, how they were interrelated, and what their impact was on the results produced. This analysis could not have been done without the economic structural change analysis that preceded it.

Much crucial information has been amassed and analyzed on different issues in three separate volumes. The interaction of this cumulative research allows the cross-fertilization so necessary for more probing questions to be answered.

Research Team and Acknowledgments

Research Team

This research was funded by the Economic Development Administration. It was undertaken by Rutgers University Center for Urban Policy Research (CUPR); Economic Modeling Specialists, Inc. (EMSI); New Jersey Institute of Technology (NJIT); The Epling Corporation (TEC); and two independent consultants. The Rutgers-EMSI-NJIT-TEC team was staffed by eight academic principals—Robert W. Burchell, M. Henry Robison, Louis J. Pignataro, John W. Epling, Joel R. Hamilton, William R. Dolphin, Catherine C. Galley, and Naveed Shad.

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Dr. Burchell has served as principal or co-principal investigator on more than 60 research contracts in a thirty-year career at Rutgers University. He has conducted studies for the Federal Transit Administration, U.S. Department of Agriculture, Fannie Mae, U.S. Department of Housing and Urban Development, and other federal, state, and local agencies. For the last five years, his work has been concentrated in the areas of economic impacts and costs of infrastructure development.

M. Henry Robison, Ph.D.

Dr. Robison brings nearly 20 years of experience in applied regional modeling to the project; he led the effort to assess the impact of EDA RLF loans on economic structural change. As principal of Economic Modeling Specialists, Inc. (EMSI), Robison has conducted a wide array of economic impact assessments in the areas of state and federal land management planning, transportation planning, and public-sector cost-benefit analysis. His professional publications focus on the estimation of regional economic impacts and their applications to public policy.

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Dr. Pignataro is Executive Director of NJIT's Transportation Information and Decision Engineering Center and Distinguished Research Professor of Transportation Engineering. He has served as principal investigator for more than 55 sponsored research projects in a variety of areas, including pipeline infrastructure studies in the New York metropolitan area.

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Dr. Epling brings to the project more than 30 years of experience working for local, regional, and state governments in four different states on issues of economic development, infrastructure investment, urban and rural revitalization, and state planning. As the principal of The Epling Corporation, he has interacted with elected and appointed officials across the country on community and regional development and infrastructure needs.

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Dr. Hamilton led the econometric effort contained in this report, designing the model and supervising of the analysis. He is Professor of Agricultural Economics at the University of Idaho, where he has taught graduate-level econometrics for more than 25 years. He is widely published in the area of economic impact assessment and public policy, and has twice testified as an expert witness on economic impacts in cases under the jurisdiction of the U.S. Supreme Court.

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William R. Dolphin is a computer specialist at Rutgers University, Center for Urban Policy Research. He has been the programmer and database manager at CUPR and its predecessor organization for close to 35 years. Mr. Dolphin has developed and overseen the modeling efforts for numerous impact evaluations of alternative growth patterns conducted by Rutgers University in New Jersey, South Carolina, Delaware, Michigan, Maryland, Kentucky, and Florida.

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Kelly Gneiting is an economic geographer and computer specialist. His efforts have been key to the completion of a number of large-scale data-analysis projects during his four-year tenure with EMSI. A program he developed for economic geographers is currently used by the University of Idaho's Department of Geography.

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Stephen R. Tibbets is a doctoral candidate in Public Affairs at the Woodrow Wilson School at Princeton University. Previously, he worked as an economic analyst at Greater New York Hospital Association, where he gained experience in working with large data sets. He has a B.S. degree in Industrial and Labor Relations from Cornell University. His current research focuses on studying patterns of industrial concentration and agglomeration effects. Mr. Tibbets was responsible for the data gathering and computer runs of the econometric analysis.

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Research Organizations

Rutgers University, Center for Urban Policy Research (CUPR)

For nearly three decades, the Center for Urban Policy Research has conducted a broad spectrum of urban research. In particular, CUPR has concentrated its efforts in the analysis of infrastructure, public finance, economic impacts and forecasting, land use, environmental policy, and geographic information systems.

The Center for Urban Policy Research has undertaken economic impact and infrastructure studies for the National Academy of Sciences, the National Trust for Historic Preservation, the Environmental Protection Agency, the New York Metropolitan Transportation Commission, the states of South Carolina and New Jersey, the Southeast Michigan Council of Governments, and the North Jersey Transportation Planning Authority.

Economic Modeling Specialists Incorporated (EMSI)

EMSI is a consulting firm specializing in regional economic modeling and analysis. EMSI has constructed semi-survey economic models in a variety of settings from small rural communities to large, and interconnected multistate regions. EMSI has analyzed issues pertaining to energy and natural resource policy, transportation policy, fiscal impacts, and firm siting, and a wide variety of issues pertaining to regional

economic development and land-management planning. EMSI's clients have included the states of Hawaii, Utah, and Idaho; the U.S. Forest Service; the U.S. Department of the Interior; county and city governments; and private firms.

New Jersey Institute of Technology (NJIT)—Transportation Information and Decision Engineering (TIDE) Center

The Transportation Information and Decision Engineering Center represents a substantial investment of the State of New Jersey's resources and research capacity in activities that are intended to address problems of relevance to local governments, the state, and the nation. The TIDE Center's research involves state transportation studies of motor vehicles and transit-based systems.

Current research projects include economic and land use impacts of transportation projects, the property rights implications of communicating transportation information, and the effect of transportation communications on traffic safety.

The Epling Corporation

The Epling Corporation has played major roles in developing an information system for MPOs and the evaluation of EDA Public Works and Defense Adjustment Projects.

Independent Consultants

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