PERFORMANCE AUDIT
OF THE

ECONOMIC DEVELOPMENT FUND

MICHIGAN DEPARTMENT OF TRANSPORTATION

August 2001

59-135-00

EXECUTIVE DIGEST

ECONOMIC DEVELOPMENT FUND

INTRODUCTION	This report, issued in August 2001, contains the results of our performance audit* of the Economic Development Fund (EDF), Michigan Department of Transportation (MDOT).
AUDIT PURPOSE	This performance audit was conducted as part of the constitutional responsibility of the Office of the Auditor General. Performance audits are conducted on a priority basis related to the potential for improving effectiveness* and efficiency*.
BACKGROUND	The mission* of EDF is to fund transportation improvements that enhance the ability of the State to compete in an international economy, that serve as a catalyst for economic growth of the State, and that improve the quality of life in the State. EDF was created under Acts 231 and 233, P.A. 1987. EDF is administered by MDOT's Office of Economic Development (OED). EDF provides funding for specific categories of road projects related to development and redevelopment opportunities (Category A), reduction of traffic congestion in urban counties (Category C), road improvements in rural counties to create an all-season road network (Category D), construction or reconstruction of roads essential to the development of commercial forests in Michigan (Category E), and road and street improvements in cities in rural counties (Category F).

* *See glossary at end of report for definition.*

Act 149, P.A. 1993, ended Category B funding for conversion of local roads to State trunklines.

Funds appropriated to Categories A, C, D, and F are awarded to applicable State, local, or county agencies based on competitive application processes. Category E funds are awarded based on a formula that considers the extent of each county's commercial forests and whether the county contains a national lakeshore or a national park.

In February 2000, OED implemented the Transportation Economic Development System (TEDS), a relational database, to help evaluate competing Category A applications. During our audit period, TEDS was not used to help evaluate Categories C, D, and F applications.

Appropriations for the fiscal year ended September 30, 2000 were $50,168,900. As of August 31, 2000, EDF had four employees.

AUDIT OBJECTIVES, CONCLUSIONS, AND NOTEWORTHY ACCOMPLISHMENTS

Audit Objective: To assess the effectiveness of selected administrative controls in ensuring the accomplishment of EDF's mission, goals*, and objectives*.

Conclusion: We concluded that the selected administrative controls were generally effective. However, we noted reportable conditions* related to the direct grant process, continuous quality improvement* process, written procedures, and enabling legislation (Findings 1 through 4).

Noteworthy Accomplishments: In 1999, OED completed a Process Improvement Implementation project in which OED identified key issues, areas of deficiency, and subsequent recommendations. One resulting change

* *See glossary at end of report for definition*

was the creation and use of a direct grant process for some projects versus MDOT's administration of all projects. OED intended that projects using the direct grant process would improve the timeliness of the projects' starts and completions while reducing the costs that MDOT incurs to administer the projects. OED's critical analysis of its own operations, and subsequently implemented changes, was an important initial effort in its use of continuous quality improvement concepts.

Audit Objective: To assess the reliability of TEDS controls in ensuring accurate, complete, and secure information for properly processing project grant application scores.

Conclusion: We concluded that TEDS controls generally ensured accurate, complete, and secure information for processing project grant application scores. However, we noted reportable conditions related to TEDS data and calculations, TEDS computation methodologies, and TEDS access and use (Findings 5 through 7).

AUDIT SCOPE AND METHODOLOGY

Our audit scope was to examine the program and other records of the Economic Development Fund. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Our audit procedures included an examination of EDF's records and activities covering the period October 1, 1998 through August 31, 2000. Our audit methodology included discussing the mission, goals, and objectives of the grant categories with EDF and other MDOT personnel. Also, we reviewed various policies and procedures relevant to

EDF's operations. We made inquiries about and observations of EDF operations and tested selected files, systems, and controls to determine EDF's effectiveness relative to selected administrative controls and TEDS reliability.

AGENCY RESPONSES

Our audit report contains 7 findings and 7 corresponding recommendations. MDOT's preliminary response indicated that it generally agrees with our findings.

August 30, 2001

Mr. Barton W. LaBelle, Chairperson
State Transportation Commission
and
Mr. Gregory J. Rosine, Director
Michigan Department of Transportation
Transportation Building
Lansing, Michigan

Dear Mr. LaBelle and Mr. Rosine:

This is our report on the performance audit of the Economic Development Fund, Michigan Department of Transportation.

This report contains our executive digest; description of fund; audit objectives, scope, and methodology and agency responses; comments, findings, recommendations, and agency preliminary responses; and a glossary of acronyms and terms.

Our comments, findings, and recommendations are organized by audit objective. The agency preliminary responses were taken from the agency's responses subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

Thomas H. McTavish, C.P.A.
Auditor General

This page left intentionally blank.

TABLE OF CONTENTS

ECONOMIC DEVELOPMENT FUND
MICHIGAN DEPARTMENT OF TRANSPORTATION

INTRODUCTION

	Page
Executive Digest	1
Report Letter	5
Description of Fund	8
Audit Objectives, Scope, and Methodology and Agency Responses	10

COMMENTS, FINDINGS, RECOMMENDATIONS,
AND AGENCY PRELIMINARY RESPONSES

Controls to Accomplish Mission, Goals, and Objectives	12
1. Direct Grant Process	12
2. CQI Process	14
3. Written Procedures	15
4. Enabling Legislation	17
Reliability of Transportation Economic Development System (TEDS) Controls	19
5. TEDS Data and Calculations	19
6. TEDS Computer Methodologies	22
7. TEDS Access and Use	25

GLOSSARY

Glossary of Acronyms and Terms	27

Description of Fund

The mission of the Economic Development Fund (EDF) is to fund transportation improvements that enhance the ability of the State to compete in an international economy, that serve as a catalyst for economic growth of the State, and that improve the quality of life in the State. EDF, a subfund of the State Trunkline Fund, was created under Acts 231 and 233, P.A. 1987. Statute specifies those agencies eligible to receive funding and the criteria and requirements for eligible projects. EDF, which is administered by the Michigan Department of Transportation's (MDOT's) Office of Economic Development (OED), provides funding for the following categories:

Category A Road projects related to target industry development and redevelopment opportunities. Agencies eligible to receive funding include MDOT, county road commissions, and city and village agencies.

Category C Reduction of traffic congestion in urban counties. Agencies eligible to receive funding include urban counties and cities within urban counties.

Category D Road improvements in rural counties to create an all-season road network. Agencies eligible to receive funding include rural counties and cities and villages within rural counties.

Category E Construction or reconstruction of roads essential to the development of commercial forests in Michigan. Agencies eligible to receive funding are counties having a national lakeshore or a national park or having at least 34% of their land as commercial forest.

Category F Road and street improvements in cities in rural counties. Agencies eligible to receive funding include rural counties and cities and villages within rural counties.

Act 149, P.A. 1993, ended Category B funding for conversion of local roads to State trunklines.

Funds appropriated to Categories A, C, D, and F are awarded based on competitive application processes. Category E funds are awarded based on a formula that

considers the extent of each county's commercial forests and whether the county contains a national lakeshore or a national park.

In February 2000, OED implemented the Transportation Economic Development System (TEDS), a relational database, to help evaluate competing Category A applications. During our audit period, TEDS was not used to help evaluate Categories C, D, and F applications.

Appropriations for the fiscal year ended September 30, 2000 were $50,168,900. As of August 31, 2000, EDF had four employees.

Audit Objectives, Scope, and Methodology and Agency Responses

Audit Objectives

Our performance audit of the Economic Development Fund (EDF), Michigan Department of Transportation (MDOT), had the following objectives:

1. To assess the effectiveness of selected administrative controls in ensuring the accomplishment of EDF's mission, goals, and objectives.

2. To assess the reliability of the Transportation Economic Development System (TEDS) controls in ensuring accurate, complete, and secure information for properly processing project grant application scores.

Audit Scope

Our audit scope was to examine the program and other records of the Economic Development Fund. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Audit Methodology

Our audit fieldwork was performed from April through August 2000. Our audit procedures included an examination of EDF's records and activities covering the period October 1, 1998 through August 31, 2000. Our audit methodology included discussing the mission, goals, and objectives of the grant categories with EDF and other MDOT personnel. Also, we reviewed various policies and procedures relevant to EDF's operations.

In connection with our first objective, we studied various documents and processes to gain an understanding of controls related to grant award processes and requirements. We identified critical administrative controls over EDF operations. In reviewing EDF's overall operations, we made inquiries about and observations of EDF's continuous quality improvement efforts and determined the extent to which written procedures addressed EDF operations. Regarding Category A funds, we determined the extent to which program administrators had developed controls over grants and we tested selected applicant files to determine what processes and controls MDOT's Office of

Economic Development (OED) staff used to determine grant awards. For grant Categories C through F funds, we evaluated grant award controls and processes relative to statutory requirements.

In connection with our second objective, we recalculated TEDS mathematical relationships, reconciled selected application data to TEDS, determined the type and extent of access to TEDS data, and evaluated the types of information TEDS uses to help OED award grants.

Agency Responses

Our audit report contains 7 findings and 7 corresponding recommendations. MDOT's preliminary response indicated that it generally agrees with our findings.

The agency preliminary response which follows each recommendation in our report was taken from the agency's written comments and oral discussion subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and Department of Management and Budget Administrative Guide procedure 1280.02 require MDOT to develop a formal response to our audit findings and recommendations within 60 days after release of the report.

COMMENTS, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

CONTROLS TO ACCOMPLISH MISSION, GOALS, AND OBJECTIVES

COMMENT

Audit Objective: To assess the effectiveness of selected administrative controls in ensuring the accomplishment of the Economic Development Fund's (EDF's) mission, goals, and objectives.

Conclusion: We concluded that the selected administrative controls were generally effective. However, we noted reportable conditions related to the direct grant process, continuous quality improvement (CQI) process, written procedures, and enabling legislation.

Noteworthy Accomplishments: In 1999, the Office of Economic Development (OED) completed a Process Improvement Implementation project in which OED identified key issues, areas of deficiency, and subsequent recommendations. One resulting change was the creation and use of a direct grant process for some projects versus the Michigan Department of Transportation's (MDOT's) administration of all projects. OED intended that projects using the direct grant process would improve the timeliness of the projects' starts and completions while reducing the costs that MDOT incurs to administer the projects. OED's critical analysis of its own operations, and subsequently implemented changes, was an important initial effort in its use of CQI concepts.

FINDING

1. Direct Grant Process

OED should improve its direct grant process procedures.

Prior to August 1999, OED procedures required MDOT to administer Category A grant projects. In administering the grants, MDOT was responsible for planning the construction, advertising for bidders, letting and awarding the bids, and overseeing the actual construction of the project. We were informed by OED that these projects took an extended period of time to complete because MDOT allocated its

limited resources first to MDOT's own (non-EDF) projects. The resulting delay in the completion of the projects is contrary to EDF's enabling act and program statement. Projects funded by EDF are those projects that will provide for an immediate impact on job creation on the local economies of the grantees and will provide for meeting critical and urgent demands of economic development on the transportation system.

Beginning August 1999, OED implemented a direct grant process to reduce the time needed to complete projects and the need for MDOT's administrative resources. The direct grant process delegates Category A project administration to the local agency applicants.

Like many program changes, evidence supporting the creation and continuation of the direct funding option can only be compiled and analyzed over time. However, to help ensure that the direct grant process is effectively implemented, OED should consider:

a. Establishing written criteria to define which local agencies may use the direct grant process. These criteria will help ensure that applicants have sufficient resources and abilities to effectively manage their projects.

b. Developing detailed guidelines and instructions to assist the eligible grantees in administering the projects. Guidelines and instructions will help ensure that successful applicants effectively manage their projects.

RECOMMENDATION

We recommend that OED improve its direct grant process procedures.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with item a. of this finding and informed us that OED has been working with other areas of MDOT to establish such criteria and expects the criteria to be in place by October 2001.

MDOT agrees with item b. of this finding and informed us that OED has developed guidelines and instructions and will continue this development based on the results of the pilot effort. MDOT expects to complete guideline and instruction development by October 2001.

FINDING

2. CQI Process

OED needs to continue its efforts to implement a CQI process.

In Executive Directive No. 1996-1, the Governor directed department directors to promote and create activities aimed at continuous improvement in the quality of the State's services when managing the use of limited State resources.

Specific to EDF, Section 247.913(d) of the *Michigan Compiled Laws* states that the State Transportation Commission must be able to report on OED's performance. An audit performed by the Office of Commission Audit for October 1990 through July 1994 reported that OED needed to "identify the degree to which the projects funded have achieved the objectives of the act for categories C through F." In February 2000, the Office of Commission Audit reported that OED has yet to comply with this requirement for funding categories C, D, E, and F.

Program effectiveness can often be evaluated and improved by establishing a CQI process. Components of such a process should include: performance indicators* for measuring outputs* and outcomes*; performance standards* that describe the desired level of outputs and outcomes based on management expectations, peer group performance, and/or historical performance; a management information system to accurately gather relevant output and outcome data on a timely basis; a comparison of the actual data to desired outputs and outcomes; a reporting of the comparison results to management; and recommendations to improve effectiveness and efficiency or change the desired performance standards.

OED has taken steps toward improving its processes. In 1999, OED completed a Process Improvement Implementation project. OED changed various processes to make operations more timely and less cumbersome. Also, OED administered periodic surveys to local agencies who have completed EDF-funded construction projects.

OED's efforts to improve EDF's ability to successfully accomplish its mission and numerous goals and objectives can be furthered by establishing measurable expected outcomes, outputs, standards, or benchmarks.

* *See glossary at end of report for definition.*

OED has established goals and objectives that require OED to measure performance achieved against other factors. The goals are stated in terms of "to enhance," "to improve," "to reduce," and "to maximize." However, OED has not established a baseline or a process to accumulate the necessary information to quantify or measure OED's efforts to meet its goals and objectives.

RECOMMENDATION

We recommend that OED continue its efforts to implement a CQI process.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with the finding and informed us that it is now measuring the degree to which projects met the objectives of the funding category. MDOT informed us that the measurements will be available beginning with the addendum to MDOT's fiscal year 1999-2000 annual report, which is expected by June 2001.

FINDING

3. Written Procedures

OED and MDOT need to complete and update their written procedures.

Written procedures help ensure that employees have detailed knowledge of their responsibilities and can consistently and properly conduct program operations. Also, written procedures minimize the disruptive impact and training costs associated with replacing existing employees.

In general, OED strives to create and maintain written procedures. However, our review of OED and MDOT procedures disclosed:

a. OED and MDOT need to complete their development of direct grant process procedures. In our assessment of the direct grant process, we identified two processes in which there were no written procedures:

(1) OED did not have a written procedure to ensure that post-construction site visits were conducted. Accordingly, OED could not be certain that all projects were completed in compliance with the grant agreements.

(2) OED and MDOT did not have a written procedure to ensure that grantees' prospective contractors were acceptable to MDOT even though MDOT maintained a list of contractors that, in its experience, were acceptable to provide construction services.

b. OED had not updated its operations manual to reflect changes resulting from the Process Improvement Implementation project.

The Process Improvement Implementation project removed the requirement for OED to send annual letters to all local and county agencies describing the EDF programs and availability of funding. Also, the Process Improvement Implementation project provides for the receipt of a letter of interest from applicants to determine the likelihood of a project being funded. The operations manual did not reflect these changes.

c. OED did not have written procedures in place to require that the factors used in the Transportation Economic Development System (TEDS) calculation methodologies be documented. We noted that TEDS uses factors to calculate indirect jobs for tourist industry-related applications. OED did not have documentation available of the reason for the use of the factors or how the factors were calculated. In addition, the individuals who participated in the development of the factors were no longer available. As a result, OED was unable to determine if the factors needed to be revised.

By completing and updating their written procedures, OED and MDOT may increase the likelihood that existing and future staff will help accomplish EDF's mission, goals, and objectives completely and effectively.

RECOMMENDATION

We recommend that OED and MDOT complete and update their written procedures.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with item a.(1) of this finding. MDOT stated that the awarding of direct grants was still in its early stages during the audit period. MDOT noted that because no construction projects funded with direct grants were completed during the audit period, it was not yet possible to conduct post-construction site visits.

MDOT noted that OED will ensure that site visits are done and certifications made that the roads were constructed in accordance with the plans. OED expects to continue to develop guidelines, including who will verify project completion, what mechanism will be used, and when this information will need to be provided, and will complete the guidelines by October 2001.

MDOT agrees with item a.(2) of this finding and expects that the operations manual will be updated by June 2001 to include a written procedure that the local agencies need to use contractors from MDOT's list of contractors that are acceptable to provide construction services. When a request for payment form is received from the local agency, OED stated that it will verify whether the lowest responsive and responsible bidder is on the list of acceptable contractors.

MDOT agrees with item b. of this finding. OED stated that it was still in the process of identifying appropriate changes resulting from the process improvement during the audit period and, since that time, identified changes have been made to the manual and additional changes will be made as future processes are developed.

MDOT agrees with item c. of this finding. OED stated that it will work with staff from the Bureau of Transportation Planning to examine the most current data. OED also stated that it will meet with Bureau staff by October 2001 and, based on that meeting, will set up a time line to determine what changes may be necessary.

FINDING

4. Enabling Legislation

The EDF enabling legislation, Act 231, P.A. 1987, as amended, does not allow for the use of up-to-date information.

Our review of statistical data used by OED to operate its programs during the audit period disclosed instances in which OED funded its programs based on outdated information sources. Our review disclosed:

a. The Act did not allow for the use of the most recent Michigan forest inventory report statistics to annually allocate $5 million to eligible counties for roads essential to the development of commercial forests.

Act 231, P.A. 1987, as amended, requires that MDOT use a specific 1981 forest inventory report to determine which counties have at least 34% commercial forest land so that $5 million may be proportionally allocated. In 1993, an updated forest inventory report became available. The use of the 1993 report would have resulted in allocation changes totaling $925,816 from fiscal year 1994-95 through fiscal year 1999-2000, reducing funding for 23 counties and increasing funding for 25 counties. One county that has never received funding would have been eligible for a total of $333,730.

b. The Act did not allow for the use of the most recent traffic count information to determine eligible Category C projects.

Section 12(1)(b), Act 231, P.A. 1987, requires urban task forces to use traffic count information on or before April 1, 1993 when designating eligibility for roadway widening projects paid for with Category C funds. In 1998-99, OED funded $26 million in Category C funded projects to reduce congestion on heavily traveled city streets and county roads within urban areas.

The use of current traffic count information would help ensure that program funds are spent on the most appropriate projects.

RECOMMENDATION

We recommend that MDOT request amendments to Act 231, P.A. 1987, as amended, to allow for the use of up-to-date information.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with the finding and expects to refer this to the Office of Governmental Affairs for inclusion to MDOT's legislative agenda.

RELIABILITY OF TRANSPORTATION ECONOMIC DEVELOPMENT SYSTEM (TEDS) CONTROLS

COMMENT

Background: TEDS is a database system used by OED to evaluate applications for Category A funding. OED implemented TEDS in February 2000. OED used TEDS to make funding decisions for 12 applications in one competitive process (call*) during our audit period.

Each year, the demand for Category A funding typically exceeds funding available. Therefore, OED requires State and local agencies to competitively apply for funding. Using TEDS, OED compiled application information then determined raw scores for certain information factors based on calculations, research, observation, and analyses. OED input the raw scores into TEDS where they were used to calculate factor scores. The applications with the highest total factor scores received available funding.

Audit Objective: To assess the reliability of TEDS controls in ensuring accurate, complete, and secure information for properly processing project grant application scores.

Conclusion: We concluded that TEDS controls generally ensured accurate, complete, and secure information for processing project grant application scores. However, we noted reportable conditions related to TEDS data and calculations, TEDS computation methodologies, and TEDS access and use.

FINDING

5. TEDS Data and Calculations

OED should improve controls to ensure that TEDS data and calculations are appropriate and accurate so that OED can properly evaluate and fund project applications.

** See glossary at end of report for definition.*

Our review of TEDS calculations and underlying data accuracy noted:

a. OED allowed applicants to include jobs in the TEDS calculation methodologies that may not have met requirements in OED's enabling legislation.

   Section 247.907(3)(b)(i) of the *Michigan Compiled Laws* requires that a proposed economic development project be related to an "immediate, nonspeculative *opportunity* for permanent job creation or retention [emphasis added]."

   TEDS application evaluation factors include the applicants' estimations on the number of new jobs that the proposed project will help create. OED defines new jobs as all jobs that would be created if a project were to be successfully funded. To allow for the application processing time, OED's practice is to count any job that was created within one year prior to the commencement of the construction project. The use of the fixed one-year cutoff seems to contrast with OED's enabling legislation because it does not ensure the inclusion of only those jobs created or retained as a result of the project. As a result, TED's data and related analyses may be inaccurate and lead to improper funding award decisions.

   OED should evaluate each application to determine if the jobs were created or retained in anticipation of OED funding regardless of the time period.

b. OED controls did not ensure that MDOT's non-OED technical experts sufficiently documented the basis for their subjective scores inputted into TEDS. The lack of documentation may result in scores that cannot be objectively confirmed by subsequent reviewers.

   OED used non-OED technical experts to evaluate and score technical application factors. Our review of documentation to support certain subjective factors disclosed:

   (1) OED did not completely document support for "growth potential" scores.

   (2) OED needs to improve its documentation to support TEDS scores for the five relative transportation needs (RTN) factors (i.e., condition, capacity, safety, user impact, and criticality).

The TEDS manual allows for a brief analysis to be entered in the TEDS database to support the score assigned for the RTN factor values. Our review of all 12 applications for funding in fiscal year 1999-2000 disclosed that OED often did not provide an analysis to support its scores.

(3) OED did not ensure that MDOT staff performing pre-grant award site visits sufficiently documented their observations on site visit forms. Site visit forms are provided to, and are considered by, the technical experts providing RTN factor scores.

We reviewed the 12 application files for call 2000-2. Our review disclosed that 10 application files were incomplete.

c. TEDS did not accurately calculate the "average salary" factor for applications containing information from multiple companies.

In the application evaluation process, OED awards points based on average salaries. Accordingly, it is important that TEDS accurately calculate average salary. OED defined "average salary" for applications containing information from multiple companies on a job-weighted average basis. However, TEDS calculated average salary on a nonweighted basis.

As a result of TEDS's inaccurate calculation methodology, 2 of 12 evaluation scores were based on incorrect average salaries.

d. TEDS's return on investment formula did not consider the long-term economic impact of new jobs contained in grant applications. Instead, the return on investment formula favors capital investments over job growth.

Return on investment is a ratio of the benefits received to their cost. Generally, the benefits received include the value of future events plus known current events. For example, the benefit of a Category A project would be the present value of future years' wages and taxes (e.g., five years) plus the sum of the proposed development's construction costs. However, OED defined "benefits" as a sum of the proposed development's construction costs plus estimates of only one year's wages for the new employees plus only one year's property tax increases on the new property.

RECOMMENDATION

We recommend that OED improve controls to ensure that TEDS data and calculations are appropriate and accurate so that OED can properly evaluate and fund project applications.

AGENCY PRELIMINARY RESPONSE

MDOT disagrees with item a. of this finding. MDOT believes that the practice of allowing some jobs already created meets the intent of the enabling legislation.

MDOT agrees with item b.(1) of this finding. OED stated that it will ask the expert in the Bureau of Transportation Planning who assists OED in developing growth potential scores to document the factors that give rise to the ultimate scoring. OED also stated that it will meet with the expert by October 2001 and establish a time frame for developing procedures for documentation.

MDOT agrees with item b.(2) of this finding and expects to improve the documentation of the rationale behind the RTN scores by June 2001.

MDOT agrees with item c. of this finding and stated that it has corrected the TEDS calculation method.

MDOT agrees with item d. of this finding and will examine the use of present value calculations and reassess whether a change to the program is warranted by May 2002.

FINDING

6. TEDS Computation Methodologies

OED should establish controls to help ensure the objectivity of TEDS computation methodologies.

TEDS is a database system used by OED as a primary tool to help objectively quantify projects' merits for competitive comparisons. Properly developed, TEDS can provide credibility to a process containing significant subjective and judgmental information. TEDS became operational in February 2000 and was used for one call during our audit period, comparing 12 applications.

Because the demand for Category A funding typically exceeds funding available, OED requires State and local agencies to competitively apply for funding. Using TEDS, OED compiled application information and then determined raw scores for certain information factors based on calculations, research, observation, and analyses. OED input the raw scores into TEDS where they were used to calculate factor scores. The applications with the highest total factor scores received available funding.

Our review of TEDS's objectivity disclosed:

a. Because OED had not completed development of TEDS during our audit period, OED had not yet formalized the use and weighting of TEDS factors from call to call. As a result, OED had nearly unlimited flexibility through its optional use of factors for each call (e.g., OED has the option to decide whether environmental impact will be considered in the application process). Also, OED practices allowed varying and optional relative weighting of factors for each call (e.g., during one call, the number of jobs created could receive a weighting of 8% while, in the next call, the weighting for jobs may be more or less).

   Processes can generally benefit from flexibility based on documented need. However, except for instances of documented need, requiring consistent use of TEDS factors from call to call would help ensure that OED made funding award decisions objectively.

   OED's unformalized use and weighting of scoring factors may decrease the objectivity of the process by providing MDOT with the opportunity to affect the final scores of applicants before funding decisions are made. Also, consistent use and weighting of factors would allow OED to compile and analyze meaningful, long-term data on project applications and scores.

b. TEDS's method of normalizing calculations did not provide for scoring scales.

   OED programmed TEDS to systematically adjust, or normalize, applicants' raw score points in an attempt to make different applications' factor scores comparable. However, the normalization methods that OED used inflated and deflated final award process scoring points based on the competing applications rather than using applicable scoring scales.

For example, 1 of the 16 factors in the scoring process rated road capacity needs on a scale of 0.00 (no need) to 10.00 (highest need) raw score points and each application could receive a maximum 5.00 final award process scoring points based on the raw score points. For the 12 applicants, the following shows how OED assigned raw score points and final award process scoring points using the normalization process. We have added an additional calculation to show the final award process scoring points if the applicable scale was instead used:

Applications	Raw score points for each	Final award process scoring points using normalization	Final award process scoring points if applicable scale was used
1	4.00 of 10.00	5.00 of 5.00	2.00 of 5.00
2 and 3	1.00 of 10.00	1.25 of 5.00	0.50 of 5.00
4 through 12	0.00 of 10.00	0.00 of 5.00	0.00 of 5.00

As shown above, using TEDS normalization process, the applicant having the raw score points of 4.00 received all 5.00 final award process scoring points because it was the most needy applicant. If TEDS used the applicable scale, which impartially reflects the relative seriousness of the applicant's need, the final award process scoring points would have been calculated as 2.00 (raw score of 4.00 points divided by total possible raw score of 10.00 points multiplied by the 5.00 possible final award process scoring points). Normalization caused a 150% overaward of final award process scoring points (5.00 versus 2.00 points).

TEDS application of the normalization process to the only call during our audit period resulted in rankings that were too high for 4 and too low for 3 of the 12 applications. Because all 12 applicants received the funding they applied for, there was no monetary effect of the normalization process for this particular call. Typically, all applicants have not received funding in past calls. Therefore, the TEDS normalization process will eventually inappropriately calculate application scores and may cause incorrect funding decisions.

c. OED did not provide applicants with the underlying application evaluation methodologies.

Providing the applicants with information about the evaluation factors, calculations, and weights would increase the accountability of EDF to the applicants. Also, OED may receive applications that are more complete, accurate, and timely. The improved applications may allow for increasingly better funding decisions.

RECOMMENDATION

We recommend that OED establish controls to help ensure the objectivity of TEDS computation methodologies.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with item a. of this finding and expects that the weighting factors will be formalized and used consistently from call to call by February 2002.

MDOT agrees with item b. of this finding and expects to review the normalization process and the scoring scales and assess whether changes are warranted by February 2002.

MDOT disagrees with item c. of this finding and does not believe that OED is accountable to applicants for providing the specific underlying application evaluation methodologies. Instead, MDOT believes that OED is accountable to applicants for providing the instructions necessary to submit appropriate application information and to provide the overall evaluation criteria. MDOT stated that both of these are available to the applicants and are provided along with advice and direction to all applicants related to specific questions.

FINDING

7. TEDS Access and Use

OED needs to increase its security over TEDS access and use.

Security over information systems' access and use is necessary to provide users with assurance that the database is accurate, complete, reliable, and secure. To achieve these control objectives, controls must be in place to ensure that only appropriate persons are able to make modifications and that any such change is attributable to a particular individual.

Based on our review of TEDS and inquiry of agency staff, we determined:

a. Two of 5 system administrators for TEDS at the time of our audit were no longer OED employees.

   System administrators have authority to update any information contained in TEDS. By allowing former employees access to TEDS, OED cannot be certain that TEDS is accurate, complete, or reliable.

b. OED had not established controls to track TEDS data modifications. At the time of our audit, TEDS could produce no documentation to determine which users logged into TEDS, what information they accessed, and what information they modified.

   Without being able to account for TEDS user activities, OED has reduced certainty that TEDS data is accurate, complete, or reliable.

RECOMMENDATION

We recommend that OED increase its security over TEDS access and use.

AGENCY PRELIMINARY RESPONSE

MDOT agrees with item a. of this finding and stated that the former employees no longer have access to TEDS.

MDOT agrees with item b. of this finding and will discuss this recommendation with the Office of Information Management by November 2001 to determine the cost involved in making this change.

Glossary of Acronyms and Terms

call	A process in which applicants compete for Category A project funding.
continuous quality improvement (CQI)	A system that defines the vision and mission of an organization and focuses on the needs and expectations of internal and external customers. It normally includes performance indicators and standards for measuring outputs and outcomes, the collection of data to measure performance in relation to the standards, and the use of the data to make modifications to improve program effectiveness and efficiency. It has an underlying philosophy that is team oriented and open to making changes on a continuous basis to improve processes.
EDF	Economic Development Fund.
effectiveness	Program success in achieving mission and goals.
efficiency	Achieving the most outputs and outcomes practical for the amount of resources applied or minimizing the amount of resources required to attain a certain level of outputs or outcomes.
goals	The agency's intended outcomes or impacts for a program to accomplish its mission.
MDOT	Michigan Department of Transportation.
mission	The agency's main purpose or the reason that the agency was established.
objectives	Specific outputs that a program seeks to perform and/or inputs that a program seeks to apply in its efforts to achieve its goals.

OED	Office of Economic Development.
outcomes	The actual impacts of the program. Outcomes should positively impact the purpose for which the program was established.
outputs	The products or services produced by the program. The program assumes that producing its outputs will result in favorable program outcomes.
performance audit	An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by parties responsible for overseeing or initiating corrective action.
performance indicators	Information of a quantitative or qualitative nature indicating program outcomes, outputs, or inputs. Performance indicators are typically used to assess achievement of goals and/or objectives.
performance standards	A desired level of output or outcome as identified in statutes, regulations, contracts, management goals, industry practices, peer groups, or historical performance.
reportable condition	A matter coming to the auditor's attention that, in the auditor's judgment, should be communicated because it represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.
RTN	relative transportation needs.
TEDS	Transportation Economic Development System.