

Preliminary Assessment of the Associations between State Child Support Enforcement Performance and Financing Structure

Working Paper

Contract Number 100-96-0011, T.O. #5

Prepared for:

**Assistant Secretary for Planning and Evaluation and
Office of Child Support Enforcement
Department of Health and Human Services**

Prepared by:

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Stephanie Laud, The Lewin Group**

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EXECUTIVE SUMMARY

Background on the Financing of State Child Support Enforcement Programs

The primary goal of the Child Support Enforcement (CSE) program, established in 1975 under Title IV-D of the Social Security Act, is to ensure that children are supported financially by both parents.¹ The CSE program is a shared undertaking involving federal, state, and local efforts. The federal government plays a prominent role in setting program standards and policy, evaluating state performance, and providing technical assistance and training to states. State CSE agencies (or IV-D agencies) work directly with families and/or through local administrative agencies and family and domestic courts to: (1) locate parents; (2) establish paternity; (3) establish child support obligations; and (4) enforce child support orders.

Child support enforcement activities conducted by states under the IV-D program are financed by several streams of revenue. Federal Financial Participation, or FFP, is the largest stream of program revenue whereby the federal government reimburses states for approximately 66 percent of allowable child support outlays. States finance the remaining 34 percent (or the state share) of CSE expenditures. There are four types of funding streams that contribute to a greater or lesser degree, depending on the state, to the financing of the state share:

- **State and Local Government Appropriations.** Both states and localities appropriate general fund revenue to support CSE activities.
- **Federal Incentive Payments.** Under law prior to the passage of the Child Support Performance and Incentive Act of 1998 (HR 3130, P.L. 105-200), each state received federal incentive payments based on the ratio of collections to administrative expenditures (cost-effectiveness) equal to at least six percent of total child support collections.² The structure and level of these federal incentive payments will change dramatically as the provisions of HR 3130 are phased-in beginning October 1, 1999. Under the new law, a state's annual incentive payments will be based on its paternity establishment, support order, current and arrearage collections, and cost-effectiveness performance levels.
- **State Share of Retained TANF Collections.** When families apply for the Temporary Assistance for Needy Families (TANF) program, the custodial parent assigns to the state the right to child support obligations collected while the family is receiving welfare benefits.³

¹ As stated on the Office of Child Support Enforcement's internet home page.

² Under the current federal incentive payments formula, a State can receive up to 10% of TANF and non-TANF child support collections as it increases its ratio of collections to administrative costs; non-welfare incentive payments are capped at 115% of welfare incentive payments for each state.

³ States may also pursue child support arrearages after the family leaves welfare to pay for TANF benefits previously paid to the family. Under the Personal Responsibility and Work Reconciliation Act (PRWORA) of 1996, families who are no longer receiving public assistance will have priority over the State in the distribution of child support arrearages that accrued after the family ceased to receive assistance from the State.

States retain a share of these TANF-related child support collections, returning a share of collections to the federal government.⁴

- **User Charges and Fees.** Several states generate a small amount of program revenue by levying application fees as well as fees for federal and state tax refund offset and paternity testing services.

In the summer and fall of 1998, The Lewin Group/ECONorthwest conducted a project to determine how states and localities finance their share of CSE program expenditures.⁵ We found that state and local CSE financing structures are both diverse and complex. State CSE programs mix funding sources at different levels in a variety of ways and most utilize at least three different funding sources to finance their share of CSE expenditures. Moreover, in many states, complex intergovernmental financing arrangements exist among the state CSE agency, county and other local administrative agencies, and the family and domestic court system.

Purpose of the Study

One key issue that emerged from the Lewin/ECONorthwest financing study described above was whether or not certain financing mechanisms are associated with program performance. As money is fungible, it is not obvious why the sources of funding for CSE activities would have an impact on a state's CSE performance. However, rather than indicating the importance of a particular funding source, the means by which a state finances its IV-D program may serve as a proxy for other characteristics of the CSE program. For example, a high General Fund contribution may serve as a proxy for other factors such as strong IV-D management or a high level of confidence in and commitment to the program on the part of the legislative branch that may be associated with better state CSE performance. In this paper, we explore this general topic by addressing two study questions. Namely,

- Is a state's method of financing its share of child support enforcement expenditures (i.e., a state's mix of general funds, retained TANF collections, federal incentive payments) associated with its program performance?
- If associations between financing structure and performance exist, do they persist after controlling for other factors that may affect performance, such as the overall level of child support enforcement investment, demographic characteristics of the IV-D caseload, and IV-D program structure?

We did not attempt to identify causal relationships between the financing structure (or other factors) and performance of state CSE programs. For example, we did not attempt to determine whether certain financing structures bring about better state CSE performance, or whether certain financing structures are artifacts of better state CSE performance.

⁴ The federal reimbursement rate for Medicaid benefit costs, the Federal Medical Assistance Percentage (FMAP), is used to calculate the federal and state shares of TANF collections.

⁵ See Fishman, Michael E., Kristin Dybdal, and John Tapogna. September 1999. *State Financing of Child Support Enforcement Programs: Final Report*. The Lewin Group/ECONorthwest.

Description of Study Variables

To assess the relationship between financing structure and CSE performance, we first had to identify:

1. A list of agreed-upon measures of CSE performance (dependent variables) and;
2. A list of factors — including but not limited to financing structure — that may be associated with the performance of state CSE programs (explanatory variables), and how to measure these factors.

In this section, we introduce each of the dependent and explanatory variables used in the study. Precise definitions of these variables may be found in the body of the working paper. Appendices A.1 through A.3 provide a complete inventory of the data series used in this analysis.

Performance Measures

For the purposes of this study, we measured state-by-state CSE performance with five measures that closely resemble the indicators that will be used to calculate incentive payments under HR 3130 (P.L. 105-200).⁶ They are the:

- Paternity Establishment Percentage;
- Percentage of IV-D Cases with Orders for Support;
- IV-D Collection Rate for Current Support;
- Percentage of IV-D Cases with Collections on Arrears; and
- Cost-Effectiveness (Total Dollars Collected Per \$1 of Expenditures).

In addition, we used a sixth measure (the composite index), which is a weighted average of the five indicators mentioned previously. The composite index could be described as an overall assessment of a state's CSE performance.

Factors Associated with Performance

The information that Lewin Group and ECONorthwest obtained in the summer and fall of 1998 captures the mix of funding sources that states use to finance their share of spending related to child support enforcement.⁷ The **financing variables** used in our study are ratios that compare IV-D spending from a particular funding source to the state's total share of spending, including:

- Share of State and Local IV-D Expenditures Financed with General Fund Appropriations

⁶ A description of how these measures differ from the indicators that will be used to calculate incentive payments under HR 3130 (P.L. 105-200) may be found in the body of the working paper.

⁷ We not capture state and local resources devoted to the IV-D program that are not claimed for federal matching purposes.

- Share of State and Local IV-D Expenditures Financed with Federal Incentive Payments
- Share of State and Local IV-D Expenditures Financed with Retained TANF Collections
- Share of State and Local IV-D Expenditures Financed with Fees and Other Cost-Recoveries

We added to our analysis several mediating variables indicating CSE program staffing and structure, caseload difficulty, and state socioeconomic characteristics that may be independently associated with performance. Our selection of the following **mediating variables** was influenced by conversations with OCSE staff and other experts in the CSE area, theoretical hypotheses as to the determinants of CSE performance, and the availability of data. We gave priority to indicators that were highly correlated with the dependent variables, the OCSE performance measures. The mediating variables we use in this study include:

- Full-Time-Equivalent Staff (FTEs) per Case
- Ratio of IV-D Expenditures to State Personal Income
- Share of State and Local IV-D Expenditures Administered at the County Level
- Compliance with System Requirements
- Ratio of TANF Caseload to Total Caseload in the IV-D System
- Measure of Program Universality
- Percent of Males Aged 20-64 Not Employed
- Percent of Births to Unmarried Mothers
- Percent of Population in an Urban Area

Study Methodology and Limitations

Because a variety of factors may affect the performance of state CSE programs, our research method incorporates regression analysis. This statistical technique allows us to estimate the independent relationship of a factor to performance while holding other characteristics about the state's program constant. The analysis consisted of the following steps:

- **Calculation of Simple Statistical Tests on Selected Variables.** Once we identified a candidate roster of explanatory variables, we calculated simple correlations between the indicators. We used these calculations to assist in selecting variables for the regression model.
- **Estimation of Regression Models.** Having identified the candidate explanatory variables, we conducted regression analyses for each of the five measures and for the composite index that combines the measures.

Conducting regression analysis allowed us to estimate the independent association between a factor and performance while holding other characteristics about the state's program constant. *However, this analysis is exploratory in nature and its results should be interpreted carefully.* The findings presented do not in any way suggest a cause and effect relationship between state CSE program performance and either the financing or other mediating variables. Problems

associated with measures that are only proxies for program performance, data quality, missing variables, simultaneity and pre-test bias, and the fact that the analysis covers only a single point in time suggest that we should interpret our findings carefully. Moreover, as is demonstrated in various alternative specifications of our model presented in Appendices G and F of this report, our findings are extremely sensitive to the way in which we define our variables. Data quality will be improved as states are required to report the performance indicators under the Child Support Performance and Incentive Act of 1998 (HR 3130, P.L. 105-200) and federal audits of this data are performed. Nevertheless, this analysis is a good beginning, that if refined over time, may enhance our understanding of the factors that affect state CSE program performance.

Key Findings

The key findings that emerged from our analysis are discussed below. Please note that our findings reflect the state of the CSE program in federal FY 1997. Since this time the environment has changed dramatically. State CSE programs have moved to implement the provisions of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), TANF caseloads have dropped significantly due to a strong economy as well as welfare reform, and states have made considerable progress in implementing automated systems to streamline operations.

A greater reliance on general fund appropriations may be associated with somewhat better performance. We found states that rely more heavily on general funds tend to score better on two performance measures, the percentage of IV-D cases with orders for support and the percentage of IV-D cases with collections on arrears. We believe that the use of general funds may serve as a proxy for other characteristics of the IV-D program (e.g., quality of management, the legislative branch's interest in the program). We found no strong, systematic relationships between the use of federal incentive payments and the performance measures. As reliance on general fund appropriations is highly and negatively correlated with reliance on retained TANF collections, we also found that states that rely more heavily on retained TANF funds tend to score less well on the percentage of IV-D cases with collections on arrears and the composite index of performance.

Several factors related to the structure of the IV-D program appear to be related to CSE performance. We estimated strong and positive relationships between staffing levels per case⁸ and two performance measures (paternity establishment percentage and percentage of IV-D cases with orders for support). We also found that increased state spending relative to the total personal income, a measure of a state's propensity and fiscal capacity to invest in CSE activities, is associated with weaker performance on the cost-effectiveness measure.

The mix of cases within the IV-D caseload also appears related to performance. The models suggest that programs that are more universal in nature (that is, servicing a larger percentage of all cases with child support awards or agreements in the state) are more cost-effective and have

⁸ Note that staffing level per case *does not* reflect the caseload of front-line workers, but the caseload of all IV-D staff combined.

higher rates of paternity establishment. We also found that IV-D caseloads that have a higher proportion of TANF recipients also exhibit higher rates of paternity establishment.

Several additional factors outside the domain of the IV-D program also appear to be related to CSE performance. Three factors — unmarried birth rates, ratio of males not employed, and level of urbanization — are negatively related to CSE performance. Specifically, we found a higher unmarried birth rate is associated with weaker overall performance, as measured by the composite index. We also estimated that as the ratio of males not employed increases, the percentage of CSE cases with orders falls. Finally, states with larger urban populations report weaker CSE performance in four areas (i.e., paternity establishment, collection rate for current support, collection rate for past-due support, and cost-effectiveness). These latter results, however, are not robust for alternate specifications of our Census-defined urbanicity variable (see Appendix G). Given that these factors are outside the domain of the IV-D program, our preliminary findings underscore Congressional concerns in HR 3130 (P.L. 105-200) about the effect of non-CSE variables on state performance.

States may face tradeoffs in attempting to maximize their overall performance. There appear to be tradeoffs between cost-effectiveness and the other performance measures. This suggests that increasing staffing levels in an attempt to strengthen performance may also increase spending, which could decrease cost-effectiveness. This may be especially true if the new spending/staff are devoted to paternity establishment efforts, which do not generate collections in the short run.

On the whole, performance measures do not appear to move in concert. Other than tradeoffs related to cost-effectiveness, we found few strong relationships between the performance measures. In other words, it does not appear that improvement on one measure will automatically translate into an improvement or worsening of another measure. Exceptions include the positive and strong correlation we measured between the paternity-establishment percentage and the percent of cases with orders indicators and the positive, albeit somewhat weaker, correlation between the percent of cases with orders and the collection rate for current support.

I. INTRODUCTION

A. Background on the Financing of State Child Support Enforcement Programs

The primary goal of the Child Support Enforcement (CSE) program, established in 1975 under Title IV-D of the Social Security Act, is to ensure that children are supported financially by both parents.⁹ The CSE program is a shared undertaking involving federal, state, and local efforts. While the federal government plays a prominent role in setting program standards and policy, evaluating state performance, and providing technical assistance and training to states, states assume basic responsibilities related to program administration. State CSE agencies (or IV-D agencies) work directly with families and/or through local administrative agencies and family and domestic courts to: (1) locate parents; (2) establish paternity; (3) establish child support obligations; and (4) enforce child support orders.

Child support enforcement activities conducted by states under the IV-D program are financed by several streams of revenue. Federal Financial Participation, or FFP, is the largest stream of program revenue whereby the federal government reimburses states for approximately 66 percent of allowable child support outlays. States finance the remaining 34 percent (or the state share) of CSE expenditures. There are four types of funding streams that contribute to a greater or lesser degree, depending on the state, to the financing of the state share:

- **State and Local Government Appropriations.** Both states and localities appropriate general fund revenue to support CSE activities.
- **Federal Incentive Payments.** Under law prior to the passage of the Child Support Performance and Incentive Act of 1998 (HR 3130, P.L. 105-200), each state received federal incentive payments based on the ratio of collections to administrative expenditures (cost-effectiveness) equal to at least six percent of total child support collections.¹⁰ The structure and level of these federal incentive payments will change dramatically as the provisions of HR 3130 are phased-in beginning October 1, 1999. Under the new law, a state's annual incentive payments will be based on its paternity establishment, support order, current and arrearage collections, and cost-effectiveness performance levels. Further, as HR 3130 provides for a fixed annual payment pool for states (adjusted each year for inflation), each state's annual incentive payments will depend on other states' performance levels in these areas. HR 3130 also requires that federal incentive payments be used for IV-D purposes exclusively.
- **State Share of Retained TANF Collections.** When families apply for the Temporary Assistance for Needy Families (TANF) program, the custodial parent assigns to the state the right to child support obligations collected while the family is receiving welfare benefits.¹¹

⁹ As stated on the Office of Child Support Enforcement's internet home page.

¹⁰ Under the federal incentive payments formula in effect through fiscal year 1999, a State could receive up to 10% of TANF and non-TANF child support collections as it increases its ratio of collections to administrative costs; non-welfare incentive payments are capped at 115% of welfare incentive payments for each state.

¹¹ States may also pursue child support arrearages after the family leaves welfare to pay for TANF benefits previously paid to the family. Under the Personal Responsibility and Work Reconciliation Act (PRWORA) of

States retain a share of these TANF-related child support collections, returning a share of collections to the federal government.¹²

- **User Charges and Fees.** Several states generate a small amount of program revenue by levying application fees as well as fees for federal and state tax refund offset and paternity testing services.

In the summer and fall of 1998, The Lewin Group/ECONorthwest were engaged to examine the current relationship between the federal IV-D program financing structure and resources allocated to the IV-D program at the state and local level. As part of this project, we determined how states and localities finance their share of CSE program expenditures.¹³ Our study approximated a point-in-time analysis for federal FY 1997, but was based on state information from federal FY 1997, state FY 1997, and state FY 1998.

We found that state and local CSE financing structures are extremely diverse in that states and localities mix funding sources from different levels in a variety of ways. In 25 states, some combination of general revenue fund appropriations and earmarked federal incentive payments financed the state and local share of IV-D program costs. Twelve states utilized some combination of general revenue fund appropriations, earmarked federal incentive payments, and retained TANF collections. Ten states relied solely upon state and or county general revenue fund appropriations to finance their CSE programs. Four states appropriated little to no general revenue funds and relied upon federal incentive payments and the state share of retained TANF collections to fund their share of program costs. Appendix A.1 provides the composition of financing sources for each state's share of IV-D expenditures.

We also found that state and local CSE financing structures were very complex. Most programs utilized at least three different funding sources to finance the state and local share of CSE expenditures. In many states, complex intergovernmental financing arrangements existed among the state CSE agency, county and other local administrative agencies, and the family and domestic court system. Twelve states reported having county-administered programs. These were: Arizona, California, Colorado, Indiana, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, North Dakota, and Ohio. However, 29 states reported having some degree of county-level financial participation in the CSE program.

While the mix of funding sources for each state was different, financing for the state and local share of child support expenditures for the nation as a whole (representing approximately 34% of total IV-D expenditures) came from state general fund appropriations (42%), federal incentive payments (25%), the state share of retained TANF collections (15%), and county general fund appropriations (9%). Overall, fees and other cost recoveries financed a small proportion (2%) of state and local shares of child support expenditures. While a significant proportion of state and

1996, families who are no longer receiving public assistance will have priority over the State in the distribution of child support arrearages that accrued after the family ceased to receive assistance from the State.

¹² The federal reimbursement rate for Medicaid benefit costs, the Federal Medical Assistance Percentage (FMAP), is used to calculate the federal and state shares of TANF collections.

¹³ See Fishman, Michael E., Kristin Dybdal, and John Tapogna. September 1999. *State Financing of Child Support Enforcement Programs: Final Report*. The Lewin Group/ECONorthwest.

local CSE expenditures were financed with state and county general fund appropriations, in many cases, non-earmarked CSE revenues flowing into state and county treasuries more than offset these appropriations.

Seventy-four percent of federal incentive payments were earmarked for the CSE program. Additionally, 26% of the state share of retained TANF collections were earmarked for the CSE program at the state and local level. In most states, the largest proportion of the state share of retained TANF collections was returned to the IV-A program.

B. Purpose of the Study

One key question that emerged from the Lewin/ECONorthwest financing study described above was whether or not certain financing mechanisms are associated with program performance. In this paper, we explore this general topic by addressing two study questions. Namely,

- Is a state's method of financing its share of child support enforcement expenditures (i.e., a state's mix of general funds, retained TANF collections, federal incentive payments) associated with its program performance?
- If associations between financing structure and performance exist, do they persist after controlling for other factors that may affect performance, such as the overall level of child support enforcement investment, demographic characteristics of the IV-D caseload, and IV-D program structure?

We did not attempt to identify causal relationships between the financing structure (or other factors) and performance of state CSE programs. For example, we did not attempt to determine whether certain financing structures bring about better state CSE performance, or whether certain financing structures are artifacts of better state CSE performance. We believe additional research and data would be necessary to develop a more definitive understanding of the determinants and outcomes of CSE program performance.

This study is also relevant to Congressional concerns regarding the effect of demographic and economic factors on the CSE performance levels achieved by states. These concerns resulted in the provisions in HR 3130 (P.L. 105-200) requiring DHHS to submit a report to Congress identifying the demographic or economic variables that account for differences in the CSE performance levels achieved by states no later than October 1, 2000.

C. Description of this Report

In the remainder of this report, we describe the data underlying the analysis (Section II); outline our study's methodology and limitations (Section III); report our results from our statistical analyses (Section III); and summarize our major findings (Section IV). Finally, within several appendices to this report, we provide sources of existing information related to this topic as well as state-specific performance data for the reader's reference.

II. DESCRIPTION OF STUDY VARIABLES

To assess the relationship between financing structure and CSE performance, we first had to identify:

1. A list of agreed-upon measures of CSE performance (dependent variables) and;
2. A list of factors — including but not limited to financing structure — that may be associated with the performance of state CSE programs (explanatory variables), and how to measure these factors.

In this section, we introduce each of the dependent and explanatory variables used in the study. Appendices A.1 through A.3 provide a complete inventory of the data series used in this analysis.

A. Performance Measures

The primary goal of the study is to determine if variations in CSE performance across states are based on differences in financing structure and other characteristics.¹⁴ To date, few studies have attempted to analyze the performance of CSE programs due, in part, to the absence of appropriate measures of performance.¹⁵ For the purposes of this study, we define program performance by five measures that states reported to OCSE for fiscal year 1997 that are proxies for the performance indicators to be used to calculate incentive payments under HR 3130 (P.L. 105-200). We did not consider other indicators of program effectiveness.

Below we provide the definition of the five CSE performance measures. In addition, we used a sixth measure (the composite index), which is a weighted average of the five CSE performance indicators. The composite index could be described as an overall assessment of a state's CSE performance. It is important to note that OCSE made adjustments in some measures to standardize the caseload data among states. For example, OCSE excluded cases for which a state had no legal jurisdiction (e.g., international and tribal cases).

1. *Paternity Establishment Percentage*

The first performance measure is based on the Paternity Establishment Percentage (PEP) as defined in PRWORA. Under the new incentive formula, states use one of two measures: (1) a IV-D (or “caseload”) paternity establishment measure (IV-D PEP), or (2) a statewide paternity establishment measure which includes voluntary paternity acknowledgements (statewide PEP). In FY 1997, states were not required to report voluntary paternity acknowledgements. As a result, some states included voluntary paternity acknowledgements in their statewide paternity establishment measures, and others did not. Because the reporting among the states for the statewide PEP was uneven, we used the IV-D PEP in our analysis. It is defined as follows:

¹⁴ This section draws from U.S. Department of Health and Human Services. January 1997. *Incentive Funding Work Group: Report to the Secretary of Health and Human Services.*

¹⁵ For example, it has been only within this decade that states measured the percentage of children on their caseloads for whom they had established paternity.

$$\text{Paternity Establishment Percentage} = \frac{\text{Number of children in the IV-D caseload in the Fiscal Year, or at the option of the state, as of the end of the Fiscal Year, with paternity established or acknowledged}}{\text{Number of children in the IV-D caseload in the Fiscal Year who were born out-of-wedlock as of the end of the prior Fiscal Year}}$$

Source: OCSE's 22nd Annual Report to Congress, FY1997.

For reference, Appendix B presents the simple correlations among the alternate PEP variables and the simple correlations between alternate PEP variables and the explanatory variables selected for our regression analysis.

2. Percentage of IV-D Cases with Orders for Support

The second indicator measures the percentage of cases in the IV-D caseload that have orders for support. OCSE defines the measures as follows:

$$\text{Percentage of IV-D Cases with Orders for Support} = \frac{\text{Number of IV-D cases with orders for support}}{\text{Number of IV-D cases}}$$

Source: OCSE's Incentives Funding Data, FY1997.

Note that the IV-D caseload — which is the denominator in this indicator as well as a component of the following two CSE performance indicators — is not as straightforward as it may seem. For example, certain types of cases, such as interstate cases, will be counted in two or more states' caseloads. Some states with highly decentralized systems may have the same case counted more than once within the same state. Cases that move between TANF and non-TANF status may also be included in both categories, once as each kind of case. Finally, families with more than one putative father may be represented in the caseload by more than one case.

3. IV-D Collection Rate for Current Support

The third performance indicator measures the proportion of current support due that is collected on IV-D cases. The proportion is expressed by the following formula:

$$\text{IV-D Collection Rate for Current Support} = \frac{\text{Dollars collected for current support in IV-D cases}}{\text{Dollars owed for current support in IV-D cases}}$$

Source: OCSE's Incentives Funding Data, FY1997.

4. Percentage of IV-D Cases with Collections on Arrears

The fourth indicator measures state efforts to collect money from cases with an arrearage. The measure specifically counts paying cases — and not total arrears dollars collected — because

states have different methods of handling certain aspects of arrears cases. The measure was calculated as follows:

$$\text{Percentage of IV-D Cases with Collections on Arrears} = \frac{\text{Number of IV-D cases with at least one payment toward arrears}}{\text{Number of IV-D cases with arrears due}}$$

Source: OCSE's Incentives Funding Data, FY1997.

It is important to note that measure defined above is only a proxy for the performance indicator associated with arrears that will be used to calculate incentive payments under HR 3130 (P.L. 105-200). Specifically, the new law excludes from the denominator the IV-D cases with tax offset payments toward arrears if none of the payments were distributed to the family.

5. Cost-Effectiveness (Total Dollars Collected Per \$1 of Expenditures)

The fifth measure assesses the total dollars collected in the CSE program for each dollar spent. The equation for cost-effectiveness is the following:

$$\text{Cost-Effectiveness} = \frac{\text{IV-D dollars collected}}{\text{IV-D dollars expended (federal and state shares)}}$$

Source: OCSE's Incentives Funding Data, FY1997.

6. Composite Index

OCSE calculated the percent of potential incentives each state would have received had the new incentive formula been fully implemented in Fiscal Year 1997. The calculation takes a weighted average of the five indicators described above, and therefore, could be described as an overall assessment of the state's performance. In calculating an average, a formula assigns a weight for the arrears and cost-effectiveness indicators that is equal to only 75 percent of the weight assigned to each of the other three indicators. The weighting scheme reflects Congress' intent to emphasize paternity establishment, order establishment and the collection of current support over cost-effectiveness and the collection of arrears. A state's score on the composite index determines the amount of incentives it receives.

B. Factors Associated with Performance

1. State CSE Financing Structure Variables

Child support enforcement activities conducted by states under the IV-D program are financed by several streams of revenue. Federal Financial Participation, or FFP, is the largest stream of program revenue, as the Federal government reimburses states for 66 percent of allowable child support outlays. States finance the remaining 34 percent (or the State share) of CSE expenditures. States fund their share of costs with up to four difference funding sources: (1)

state and local general fund appropriations, (2) federal incentive payments, (3) retained TANF collections, and (4) fees and other cost recovery mechanisms. As described in the introduction to the report, in the summer and fall of 1998, the Lewin Group and ECONorthwest obtained information on how states finance their share of CSE expenditures.

To estimate the relationship between financing structure and state CSE performance, we used a series of variables that capture the mix of funding sources that states use to finance their share of child support enforcement spending. Specifically, the variables are ratios that compare IV-D spending from a particular funding source to the state's total share of spending. It is important to note that our data do not capture state and local resources devoted to the IV-D program that are not claimed for federal matching purposes.

We calculated four ratios for each state using the Lewin/ECONorthwest survey data. For example, in Fiscal Year 1997, New Mexico's total administrative spending on CSE activities totaled approximately \$23.7 million. Our survey indicated that the state's share of CSE spending amounted to \$6.8 million in Fiscal Year 1997. The New Mexico IV-D program financed that amount through a combination of general fund appropriations (\$4.2 million), federal incentive payments (\$1.4 million), retained TANF collections (\$1.0 million), and fees (\$0.2 million). We calculated New Mexico's finance-related variables as follows:

- Share of state and local IV-D expenditures financed with General Fund appropriations (\$4.2 million divided by \$6.8 million, or 0.62);
- Share of state and local IV-D expenditures financed with federal incentive payments (\$1.4 million divided by \$6.8 million, or 0.21);
- Share of state and local IV-D expenditures financed with retained TANF collections (\$1.0 million divided by \$6.8 million or 0.15);
- Share of state and local IV-D expenditures financed with fees and other cost-recoveries (\$0.2 million divided by \$6.8 million or 0.03).

We show the general equations for the CSE financing structure variables that we used in our analyses below.

a) Share of State and Local IV-D Expenditures Financed with General Fund Appropriations

$$\begin{array}{l} \text{Share of State and Local} \\ \text{IV-D Expenditures} \\ \text{Financed with General} \\ \text{Fund Appropriations} \end{array} = \frac{\text{General Fund appropriations used to finance the state and} \\ \text{local share of IV-D expenditures}}{\text{State and local share of IV-D expenditures}}$$

Source: Lewin Data, FY1997.

b) Share of State and Local IV-D Expenditures Financed with Federal Incentive Payments

$$\frac{\text{Share of State and Local IV-D Expenditures Financed with Federal Incentive Payments}}{\text{State and local share of IV-D expenditures}} = \frac{\text{Federal incentive payments used to finance the state and local share of IV-D expenditures}}{\text{State and local share of IV-D expenditures}}$$

Source: Lewin Data, FY1997.

After accounting for General Fund appropriations and federal incentive payments, retained TANF collections represent the balance of the state share of CSE funding in many states.¹⁶ The ratios of state and local shares financed with General Fund appropriations and retained TANF collections are highly and negatively correlated. That is, when a state chooses to earmark retained TANF collections to the CSE program, those dollars are typically substituting General Fund appropriations. When the ratio of retained TANF collections rises, the General Fund share tends to fall and vice versa. The strong relationship between the variables means that we can use one, but not both, of the variables in the regression model. Were we to use both variables, we would bias the results for all of our explanatory variables. As a result, we include a variable that specifically measures the impact of General Fund appropriations on performance in our analysis, but do not include a variable that specifically measures the impact of retained TANF collections.

To determine if it would change the results of our analysis, we substituted the retained TANF collections variable for the General Fund appropriations variable in our regression analysis. As expected, the associations we find between retained TANF collections and CSE program performance are opposite in direction from the associations we find between General Fund appropriations and CSE program performance. In addition, introducing the retained TANF collections variable does not change markedly the sign or significance of the coefficients associated with the other explanatory variables in the model.

2. Other Mediating Variables

Additional explanatory factors beyond CSE financing such as CSE program staffing, resources, and structure, caseload difficulty, and state socioeconomic characteristics, may be independently associated with state CSE performance. We added to our analysis several mediating variables in these areas, based on conversations with OCSE staff and other experts in the CSE arena, theoretical hypotheses as to the determinants of CSE performance, and the availability of data. However, as we describe later in our discussion of study methodology and limitations, we gave priority to indicators that were highly correlated with the dependent variables, the OCSE performance measures.

The lack of reliable data prevented inclusion of certain variables that may affect performance. For example, we were not able to measure the extent to which states rely on judicial versus administrative-based enforcement processes. Our omission of this process variable, and other

¹⁶ We omitted fees and other cost-recovery mechanisms from our analyses because they represent a negligible share of financing for most states.

determinants of performance that we were unable to quantify, may bias the results of our analysis.

We describe the mediating variables we used to represent CSE program staffing, resources, and structure, caseload difficulty, and state socioeconomic characteristics in the following paragraphs.

a) *CSE Program Staffing, Resources, and Structure*

(1) Full-Time-Equivalent Staff (FTEs) per Case

Turetsky (1998) speculates that program performance is associated with the relationship between the number of CSE staff employed by a state and the number of cases in the state.¹⁷ The theory that CSE performance is related to staffing levels is not new. A number of policymakers and commissions, including the US Commission on Interstate Child Support, have called for studies on the issue. To test this hypothesis, we examined two variables: (1) the ratio of IV-D expenditures in a state to the number of IV-D cases, and (2) the ratio of the number of full-time equivalent staff in a state to the number of IV-D cases. We used the later in our regression model as it was generally more highly correlated with state CSE performance, as evidenced by our simple correlations (see Appendices C.2 and C.3). We defined the variable as follows:

$$\begin{array}{l} \text{Full-Time-Equivalent} \\ \text{Staff (FTEs)} \\ \text{per Case} \end{array} = \frac{\text{FTEs employed as of September 30, 1997}}{\text{Number of cases in the IV-D system}}$$

Source: OCSE's 22nd Annual Report to Congress, FY1997.

Please note that the staffing level per case does not reflect the caseload of frontline workers, but the caseload of all IV-D staff combined. The denominator — OCSE's traditional measure of IV-D caseloads — is not as straightforward as it may seem. For example, certain types of cases, such as interstate cases, will be counted in two or more states' caseloads. Some states with highly decentralized systems may have the same case counted more than once within the same state. Cases that move between TANF and non-TANF status may also be included in both categories, once as each kind of case. Finally, families with more than one putative father may be represented in the caseload by more than one case.

Given this recognized complexity, we considered redefining the denominator as the number of custodial parents in the state. The most reliable source of national data about custodial parents is the Current Population Survey's Child Support Supplement (CPS-CSS). A state by state breakdown of noncustodial parents is not published, but was run by DHHS for the purposes of this project. These data are less reliable for states with small populations. We report our findings using this alternative variable in Appendix F.

¹⁷ See Turetsky, Vicki. 1998. *You Get What You Pay For: How Federal and State Investment Decisions May Affect Child Support Performance. Draft Report.* Center for Law and Social Policy. Washington DC.

(2) Ratio of IV-D Expenditures to State Personal Income

The propensity and fiscal capacity to invest in CSE activities varies considerably across states. To address this variation, we include the ratio of IV-D expenditures to total state personal income. The variable's numerator measures a state's propensity to invest in CSE activities, while the denominator gauges the state's fiscal capacity to pay, assuming that personal income is a reasonable proxy for a state's potential to raise revenue for public functions.

$$\text{Ratio of IV-D Expenditures to State Personal Income} = \frac{\text{Total IV-D administrative expenditures (federal and state)}}{\text{Total state personal income}}$$

Source: OCSE's 22nd Annual Report to Congress, FY1997; U.S. Department of Commerce, Bureau of Economic Analysis, FY 1997

(3) Share of State and Local IV-D Expenditures Administered at the County Level

PRWORA 1996 required states to develop centralized CSE case registries and distribution units. Federal policymakers justified the mandate by pointing to certain states that relied on county-based operations and were failing to share enforcement information across intrastate jurisdictions.

To test the hypothesis that centralization strengthens enforcement, we use data from the Lewin/ECONorthwest financing study. Specifically, we calculated the share of IV-D program funding that is administered at the county level. For example, in fiscal year 1997, Oregon spent \$15.8 million in state and local resources on CSE, of which counties administered \$2.3 million. Therefore, Oregon's share of state and local IV-D expenditures administered at the county level equals 0.15, or \$2.3 million divided by \$15.8 million.

The presence of expenditures at the county level does not imply the program is county-administered. While 12 states report having county-administered programs, 29 states report having some degree of county-level financial participation in the CSE program.¹⁸ For example, in many states, counties make direct appropriations from county general funds for the IV-D program. These appropriations are often supported implicitly by IV-D incentive or collection revenues. However, county-administered programs typically have a majority share of CSE expenditures overseen at the county level. We calculated the variable as follows:

$$\text{Share of State and Local IV-D Expenditures Administered at the County Level} = \frac{\text{State and local share of IV-D expenditures administered at the county level}}{\text{State and local share of IV-D expenditures}}$$

Source: Lewin Data, FY1997.

¹⁸ See Fishman, Michael E., Kristin Dybdal, and John Tapogna. September 1999. *State Financing of Child Support Enforcement Programs: Final Report*. The Lewin Group/ECONorthwest.

(4) Compliance with System Requirements

The Family Support Act (FSA) of 1988 required that states upgrade their automated systems and provided funding at a 90% match rate to do so. The General Accounting Office (1997) documented the early benefits of this investment.¹⁹ We hypothesize the degree of a state's automation is related to performance.

To measure the degree of computer automation, we used OCSE data that indicate whether—as of the end of fiscal year 1997—a state was certified as complying with the automation requirements specified in the FSA. A dummy variable—equaling one—indicates compliance with the FSA.

b) Caseload Difficulty

(1) Ratio of TANF Caseload to Total Caseload in IV-D System

IV-D program officials have speculated that the composition of a state's caseload affects a state's program performance. Specifically, some hypothesize that performance improves as the program serves a greater share of the population that is not eligible for cash assistance. These non-welfare families report higher collection rates of current support.²⁰ By contrast, caseloads comprised of current or former welfare recipients tend to be more difficult to serve — perhaps in part because a larger share of the parents in these families have lower incomes, have less education, and are never married. Our analysis includes two indicators that measure the relative difficulty of a state's IV-D caseload. The first indicator reports the share of a state's IV-D caseload that is enrolled in the Temporary Assistance for Needy Families program (TANF). We define this variable — the Ratio of TANF Caseload to Total Caseload — as follows:

$$\begin{array}{l} \text{Ratio of TANF} \\ \text{Caseload to} \\ \text{Total Caseload} \end{array} = \frac{\text{Average monthly TANF caseload (excluding arrears only) in IV-D system}}{\text{Average monthly caseload (excluding arrears only) in IV-D system}}$$

Source: OCSE's 22nd Annual Report to Congress, FY1997.

(2) Measure of Program Universality

Our second indicator of caseload difficulty measures “program universality.” A program that serves every custodial parent in the state with a legal award — regardless of his or her eligibility for TANF — would be considered fully universal. Using CPS data, federal staff from DHHS calculated the variable we utilized to indicate the degree of program universality from CPS-CSS data. Although we have concerns about the reliability of the variable for several smaller states,

¹⁹ See General Accounting Office. September 1997. *Child Support Enforcement: Leadership Essential to Implementing Effective Automated Systems*. GAO/T-AIMD-97-162. Washington, DC.

²⁰ See Lyon, Matthew. May 1999. *Characteristics of Families Using Title IV-D Services in 1995*. US Department of Health and Human Services, Assistant Secretary for Planning and Evaluation.

we found that including the measure in the analysis generally strengthened the models' explanatory power. Specifically, we define the variable as:

$$\text{Measure of Program Universality} = \frac{\text{CSE-eligible custodial parents with legal awards in the IV-D system}}{\text{CSE-eligible custodial parents with legal awards in the state}}$$

Source: CPS/CSS Match (ASPE), March/April 1996.

Please note that the numerator and denominator of this ratio exclude the CSE eligible population who apply for services or for whom paternity determination has been made, but for whom a support order has not been established.

c) *State Socioeconomic Characteristics*

(1) Percentage of Males Age 20-64 Not Employed

We used three variables to capture socioeconomic factors that may indirectly affect CSE performance. The first — the percentage of the male population not employed (or the percentage of the male population unemployed or out of the labor force) — measures the relative difficulty that absent parents (typically fathers) have in finding work. Here, we tested both the percentage of males not employed and the percentage of males age 20-64 not employed. As the work of Garfinkel et al (1996), Braver et al (1991) and others suggests that CSE performance may be weaker in states with a higher the share of *working-age* males who are not employed²¹, we used the latter in our regression models for theoretical reasons. We defined the variable as follows:

$$\text{Percentage of Males Age 20-64 Unemployed or Out of the Labor Force} = \frac{\text{Number of males age 20-64 minus number of employed males age 20-64}}{\text{Number of males age 20-64}}$$

Source: Bureau of Labor Statistics, 1997.

(2) Percent of Births to Unmarried Mothers

Next, we measured the percentage of all births that are to mothers who are not married. Numerous studies have indicated that IV-D programs typically have more difficulty securing support for children of unmarried mothers — in part, because paternity must be determined before an award is established.²² As a result, states with high-unmarried-birth rates may — other

²¹ See Garfinkel, Irwin et al. November 1996. "Trends in Child Support." *Demography*. Volume 33 (44). See also Braver, Sanford L., Pamela J. Fitzpatrick and R. Curtis Bay. "Noncustodial Parent's Report of Child Support Payments." *Family Relations*. Volume 40(2).

²² See for example, Meyer, Daniel R. and Bartfeld, Judi. *Patterns of Child Support Compliance in Wisconsin*. Institute for Research on Poverty Discussion Paper #1130-97. See also Caputo, Richard K. "The Effects of Race and Marital Status on Child Support and Work Effort." *Journal of Sociology and Social Welfare*. Volume 23(3).

factors being equal — have weaker CSE performance. This may change as states increase their voluntary paternity establishment efforts over time.

We considered three different variables to capture this effect: (1) the percent of female-headed households, (2) the percent of births to teenage mothers, and (3) the percent of births to unmarried mothers. We chose the later because it was generally more highly correlated with state CSE performance than the percent of female-headed households, as evidenced by our simple correlations. It behaved similarly to the percent of births to teenage mothers (see Appendices C.2 and C.3). We defined the variable as follows:

$$\text{Percentage of Births to Unmarried Mothers} = \frac{\text{Number of live births to unmarried mothers}}{\text{Number of live births}}$$

Source: National Vital Statistics Report, 1997.

(3) Percent of Population in an Urban Area

Finally, we include a variable that gauges the degree of a state's level of urbanization. The share of the state's population that lives in urban areas could be related to CSE performance in a number of ways. On one hand, states that have large urban populations tend to have higher average personal incomes, suggesting job opportunities for absent parents may be better. On the other hand, large urban centers exhibit higher concentrations of poverty, higher rates of teen births, and lower wage jobs, all of which would suggest a more difficult environment for child support enforcement.

$$\text{Percentage of People Living in Urban Areas} = \frac{\text{Number of people living in urban areas in state}}{\text{Number of people living in the state}}$$

Source: U.S. Bureau of the Census, 1990.

In this specification, we utilize the standard Census definition of an “urban area” which includes all territory, population, and housing units in: (1) urbanized areas, or central cities and the adjacent densely settled urban fringe that together have a minimum of 50,000 persons *and* (2) places of 2,500 or more persons outside urbanized areas. We also tested an alternate specification using a narrower Census definition of “urbanized area” that includes only central cities and the adjacent densely settled urban fringe that together have a minimum of 50,000 persons. We report our findings using this alternative variable in Appendix G.

III. STUDY METHODOLOGY AND LIMITATIONS

A. Methodology

Only a few analyses have attempted to identify factors that influence the performance of CSE programs. The lack of research in the area has been due, in part, to the absence of appropriate measures of performance as well as the absence of comparable data across states. Because a variety of factors may be related to the performance of CSE programs, our method incorporates regression analysis. This statistical technique allows us to estimate the independent relationship between a factor and performance while holding other characteristics about the state's program constant.

A more rigorous analysis would compare changes in program performance with explanatory factors over time. However, the availability of state CSE financing structure information for only one year, 1997, dictated a point-in-time, cross-sectional analysis for the same period.

The analysis consisted of the following steps:

- **Calculation of Simple Statistical Tests on Candidate Variables.** Once we identified a candidate roster of explanatory variables, we calculated simple correlations between the indicators. We used these calculations to assist in selecting variables for the regression model. Specifically, we avoided using pairs of variables that were highly related to one another. For example, we did not include the state AFDC reciprocity rate in our model along with the ratio of births to unmarried mothers.
- **Estimation of Regression Models.** Having selected our explanatory variables, we conducted regression analyses for each of the five measures and for the composite index that combines the measures. We then conducted a series of sensitivity analyses, adding and subtracting individual explanatory variables, to determine the importance of those variables. We analyzed the signs and magnitudes of the coefficients, tests for statistical significance on individual variables, and goodness-of-fit statistics to help us decide which variables to keep in the final models.

B. Limitations

Our analysis has several limitations. First, with respect to data quality, the data series used in the regressions are, in some cases, relatively new and have not been rigorously audited or checked by federal or state officials. For example, some states reported that they collected arrearages in more than 100 percent of the cases for which past-due support was owed, which is not possible given the indicator's definition. Also, we observed sizable changes in some variables over time, which suggested states were refining their reporting and calculation methods. Finally, a number of states simply did not report certain dependent and explanatory variables. To correct for the most serious problems of missing or miscalculated data, we dropped certain states from our analyses. The table below shows the number of states included in each of the six regression models. Appendix D shows which states we dropped from each of the models because data were either missing or unreliable. Note that we dropped all states from our model of the Composite Percentage of Maximum Incentive that had missing or unreliable data for any of the other performance measures.

Model (Dependent Variable)	Number of States
Paternity Establishment Percentage	47
Percentage of IV-D Cases with Orders for Support	51
IV-D Collection Rate for Current Support	47
Percentage of IV-D Cases with Collections on Arrears	41
Cost-Effectiveness (Total Dollars Collected Per \$1 of Expenditures)	49
Composite Percentage of Maximum Incentive	38

Congress chose to phase-in the new incentive system over time in part because of concerns about states' abilities to calculate and report the performance measures. When more reliable data become available for those states, we encourage researchers to replicate this analysis. We expect that in doing so researchers might draw somewhat different conclusions about the associations between state CSE performance and financing structure and other mediating variables.

In addition to data quality, we were also concerned about having omitted potential determinants of CSE performance for which we had no measures. For example, we know that not only the number of CSE enforcement staff in each state, but the quality of the staff and management also affects performance. Likewise, a state's reliance on administrative versus judicial processes may strengthen or weaken a program but is not easily measured. In short, we can point to a number of factors that may affect performance that we have knowingly left out or omitted from the analysis. To the extent those omitted variables are important in explaining CSE performance, our findings will be biased. That is because our models will assign the effects of these omitted variables to the variables that we did include. We did not attempt to correct for this bias and urge readers to consider it when interpreting our results.

Our results may also be influenced by "pre-test bias". We used simple correlations between a candidate roster of explanatory variables and our dependent variables to inform our selection of explanatory variables for our regression model. Specifically, we included those explanatory variables that were the most highly correlated with our dependent variables and avoided using pairs of variables that were highly correlated with each other. Once we had determined our base regression model, we also conducted a series of sensitivity analyses, adding and subtracting individual explanatory variables to determine the importance of those variables. Both of these selection procedures may contribute to pre-test bias in our findings. Pre-test bias means that we are more likely to find statistically significant associations between our explanatory and dependent variables than we would otherwise.

Lastly, our study's findings are obscured by simultaneity bias. This problem occurs when causation between dependent and explanatory variables runs in both directions. Our analysis explores how financing structure affects CSE performance. In fact, the effect may run both ways. That is, the state's CSE performance may also affect how the state finances its program. For example, consider the relationship between the cost-effectiveness measure (dependent variable) and the share of the state expenditures financed with federal incentive payments (explanatory variable). On one hand, the state's willingness to earmark incentive payments to CSE may help predict strong performance. On the other hand, higher cost-effectiveness directly increases the amount of incentives a state will receive. In short, it's unclear whether financing is causing performance or vice versa. Similar, albeit more subtle, relationships exist between the

remaining financing and performance variables. Simultaneity bias affects our interpretation of the regression results. While we would ideally like to say that our explanatory variables *cause* changes in performance, they might not. Instead our findings report the *associations* between the explanatory and dependent variables, after controlling for other factors.

Given the limitations described above, it is not surprising that our findings are highly volatile. To provide an example of the extreme sensitivity demonstrated in alternative specifications, we have presented findings in Appendices F and G which use different definitions of the staffing levels per case and urbancity variables.

IV. STUDY RESULTS

The following sections describe the statistical methods used to estimate relationships between the explanatory and dependent variables. We initiated this work with an analysis of the correlations between the variables. While one should not draw conclusions from these simple statistics, the correlation coefficients serve as important inputs to the development of the regression models. Section A provides a brief summary of our correlation findings. In Section B, we describe in-depth the key findings of our regression work.

A. Simple Correlations

A key step in designing a regression model is gaining a better understanding of how the data that underlie the analysis interrelate. In this study, we estimated simple correlation coefficients, which measure the strength and direction of the relationship between two variables. In doing so, we focused on the following questions:

- Are the dependent variables (i.e., performance indicators) associated with one another? We examined this issue simply to investigate whether the level of performance in one area is associated with the level of performance in another area. For example, are improvements in a state's paternity establishment performance related to improvements in a state's collection rate for current support?
- Are the explanatory variables correlated with one another? While regression analysis is designed to isolate the effects of each variable, the method suffers if two explanatory variables, such as the AFDC reciprocity rate and the rate of births to unmarried mothers, are highly correlated. That is, if two variables move in concert, the model has difficulty determining their independent effects on the dependent variable.
- Are the explanatory variables correlated with the dependent variables? If an explanatory variable, such as the percent of males not employed, is correlated with a dependent variable, such as the IV-D collection rate for current support, the explanatory variable may prove to be important in the regression model. However, many variables that appear promising based on the results of simple correlations may not be associated with the dependent variable after controlling for other factors in a regression model.

We present our findings of the correlation analyses in Appendices C.1 through C.4. We briefly summarize the findings below for variables that displayed correlations at least at the ten-percent level of statistical significance.

1. Correlations Among Dependent Variables

We found little positive or negative correlation between the dependent variables, which suggests states will have to address each performance measure independently. Said differently, it does not appear that the level of performance on one measure is associated with the level of performance on another. There are two exceptions to this general finding. First, states that perform well in paternity establishment also tended to perform well in order establishment. This may be expected because paternity establishment is a necessary first step to creating an order for support. Second, states that have a higher percentage of IV-D cases with orders for support also had a higher collection rate for current support. (See Appendix C.1.)

2. Correlations Between Explanatory Variables and Dependent Variables

Correlations between all explanatory variables we considered for this analysis and our dependent variables suggested that certain variables were likely to perform well in the regression analysis. Specifically, we found that states with higher overall staffing levels per case had a higher percentage of IV-D cases with orders for support. Additionally, states with a higher percentage of males aged 20-64 who were not employed and a higher percentage of births to unmarried mothers had lower paternity establishment performance, a lower collection rate for current support, and a lower percentage of IV-D cases with orders for support. These correlations are all in the direction we would expect. (See Appendices C.2 and C.3.)

3. Correlations Among Explanatory Variables

We also estimated that states with higher overall staffing levels per case also had a higher ratio of IV-D expenditures to state personal income, which may be intuitive as the level of program expenditures is strongly associated with staffing levels. However, the correlation was not so high as to warrant our dropping either one of the variables from the analysis.

Additionally, states that used General Fund appropriations were less likely to use federal incentive payments in the financing of state IV-D expenditures. This relationship may suggest a degree of substitution between the two financing mechanisms. Again, the magnitude of this correlation did not pose problems for the modeling exercise.

The correlations among all the explanatory variables we considered for this analysis are outlined in Appendix C.4.

B. Multivariate Regression Analysis

To capture the relationship of each explanatory variable to the performance of CSE programs, we developed six multivariate regression models, one model for each performance indicator and one for the composite index. Unlike the simple correlations described previously, the output from multivariate regression analysis reports the association between the dependent variable (e.g., CSE performance) and an explanatory variable (e.g., Percent of Births to Unmarried Mothers) *holding all other explanatory variables constant*. For example, one might ask, “How would a state’s unmarried-birth rate be correlated with its paternity-establishment ratio if the state was typical in every other way?” If designed properly with reliable data, a regression analysis should report an estimated relationship between the explanatory variable and given performance indicator.

It is important to note, however, that we did not attempt to identify causal relationships between the financing structure (or other factors) and performance of state CSE programs. For example, we did not attempt to determine whether certain financing structures bring about better state CSE performance, or whether certain financing structures are artifacts of better state CSE performance. We believe additional research and data would be necessary to develop a more definitive understanding of the determinants and outcomes of CSE program performance.

The findings for our six regression models are reported in Appendix E. Each model consists of the 12 explanatory variables we detailed in Section II. For each model, we report a coefficient

for each of the explanatory variables. The sign of the coefficient indicates the variable's positive or negative association with the dependent variable. The actual value of the coefficient is difficult to interpret without reviewing the data that underlie the analysis, which we will do below. We also report the coefficient's statistical significance. A coefficient that is statistically significant at the one-percent level implies that — with 99 percent certainty — the association between the explanatory variable and dependent variable is not equal to zero. We have more confidence in the reported relationships of variables that are statistically significant at the one-percent level than those that are significant at the five- or ten-percent level. In those cases where the coefficient is *insignificant*, we can not be certain — in a statistical sense — that an association between the explanatory and dependent variables actually exists.

In addition to the coefficients on the individual explanatory variables, we report a statistic called an “adjusted R-squared” for each of the models. The statistic is an overall measure of a model's explanatory power. Specifically, it measures the percentage of variation in the dependent variable that can be explained by the explanatory variables — after adjusting for the number of explanatory variables used. The statistic varies from 0.15 in the Percentage of IV-D Cases with Collections on Arrears model to 0.44 in the Percentage of IV-D Cases with Orders for Support model. In other words, our 12 explanatory variables explain about 15 percent of the variation in the arrears performance indicator and almost 44 percent of the variation in the cases with orders indicator. The lower explanatory power reported for the arrears model may be due to the fact that the quality of the data for this new performance measure is inconsistent across states.

In the following sections, we describe in more detail the estimated coefficients and their implications. First, we discuss the state CSE financing structure and mediating variables that displayed statistically significant associations at the ten-percent level (at minimum) with at least one of the various CSE performance indicators. Second, we outline the explanatory variables that did not display statistically significant associations with any of the CSE performance indicators.

1. State CSE Financing Structure Variables Displaying Statistically Significant Associations with State CSE Performance

a) Share of State and Local IV-D Expenditures Financed with General Fund Appropriations

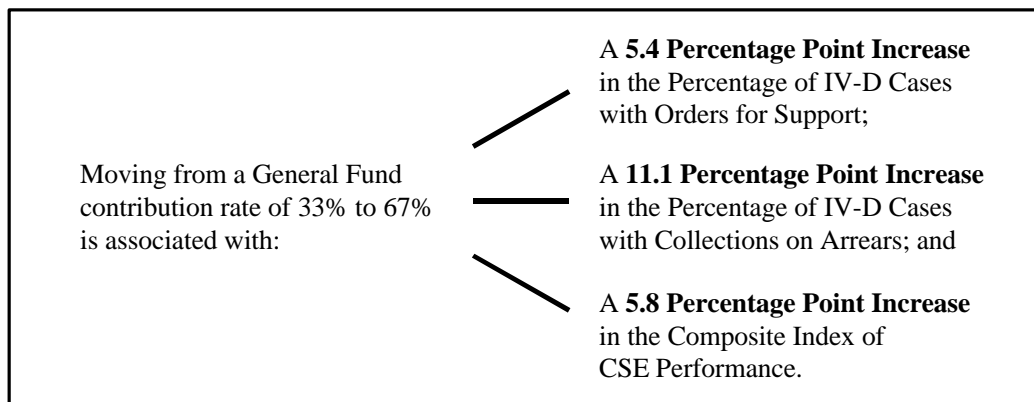
In five of the six models, the coefficient on the Share of State and Local IV-D Expenditures Financed with General Fund Appropriations variable is positive. In three of these models, the coefficient on General Fund variable is positive and statistically significant, suggesting that state reliance on General Fund appropriations may be associated with better performance.

The coefficient levels are difficult to interpret unless placed into context. To do so, we used our model to simulate what change in CSE performance would be associated with an increase in a state's reliance on General Fund appropriations as a source of funding, holding all other factors constant. This analysis is presented below. It is important to note that such a simulation—and the simulations that appear in the following sections—are subject to the same limitations as our regression analyses themselves. Namely, as we are not able to determine causal relationships between our independent and dependent variables, we are not able to simulate what change in

CSE performance would be *caused by* or *result from* an increase in a state's reliance on General Fund appropriations as a source of funding.

To begin, we considered a hypothetical state that historically funded its CSE program with equal amounts of General Funds, federal incentives, and retained TANF collections. We then assumed the state withdrew all of its retained TANF collections and replaced the amount with General Fund appropriations. The model suggests that a change in the General Fund contribution rate of 33% would be associated with a 5.4 percentage point increase in the percent of cases with orders for support,²³ an 11.1 percentage point increase in the percent of IV-D cases with collections on arrears, and a 5.8 percentage point increase in the composite index.

Figure 1: Statistically Significant Associations between General Fund Contribution and Performance



The implication of this finding, however, is not clear. Money is fungible and while the amount of resources a state invests in a program may impact CSE performance, it is less obvious why the source of that money would have an impact. Rather than indicating the importance of this particular funding source, the General Fund contribution variable may serve as proxy for other characteristics of the CSE program (e.g., IV-D management, confidence in and commitment to the program on the part of the legislative branch) that may be associated with state CSE performance. For CSE activities to be financed with General Funds, legislative action is required. This is not always the case for the use of federal incentive payments and retained TANF collections.

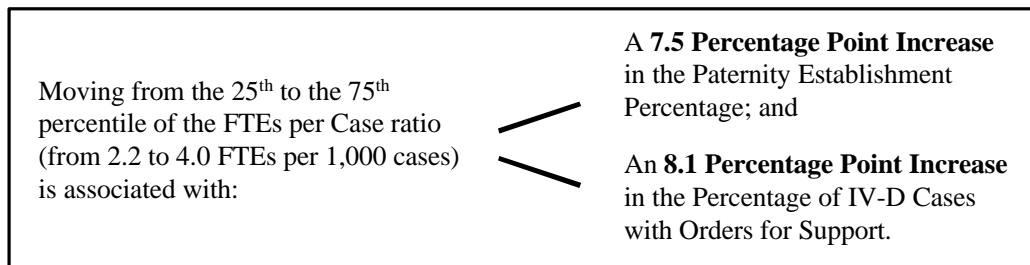
²³ We obtained this result by multiplying the assumed change in the GF variable (0.33) by the coefficient from the Cases with Orders model (0.16).

2. Mediating Variables Displaying Statistically Significant Associations with State CSE Performance

a) FTEs Per Case

Our measure of program staffing levels — the number of full-time equivalent staff divided by the CSE caseload²⁴ — demonstrates a positive association with five of the six performance measures. However, the relationship is statistically significant in only two of those five cases (i.e., Paternity Establishment Percentage and Percentage of IV-D Cases with Orders for Support). The positive and significant relationship with the two measures may be related to the fact that these establishment activities are labor-intensive and not easily automated. To illustrate the relative magnitude of the two significant coefficients, we considered the effect of a state moving from the 25th percentile of the FTEs per case value (0.0022)²⁵ to the 75th percentile of the FTEs per case value (0.0040).²⁶ The models suggest that such a movement would be associated with a 7.5 percentage point increase in the Paternity Establishment Percentage and a 8.1 percentage point increase in the Percentage of IV-D Cases with Orders for Support. Again, given our study's limitations, we have more confidence in the direction of the relationships reported by the models (i.e., positive) than we do in these precise estimates. Please see Appendix F for a discussion of the alternate specification of this variable we tested.

Figure 2: Statistically Significant Associations between FTEs per Case and Performance



b) Ratio of IV-D Expenditures to State Personal Income

Our findings on the states' propensity and fiscal capacity to invest in the CSE program were mixed, with four of the models reporting a negative association with performance and two reporting positive associations. In the one case where we report a statistically significant coefficient — Cost-Effectiveness — the association is negative. Consequently, the model suggests that greater state spending on IV-D activities, holding state personal income constant, is associated with a decline in the cost-effectiveness measure. This effect may be intuitive as

²⁴ Note that this measure DOES NOT reflect the caseload of front-line workers, but the caseload of all IV-D staff combined.

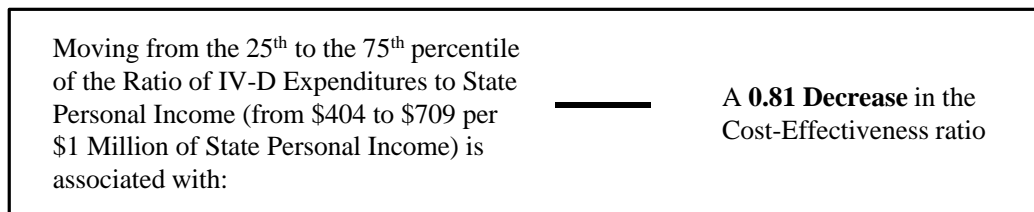
²⁵ That is, 2.2 caseworkers per every 1,000 CSE cases.

²⁶ That is, 4.0 caseworkers per every 1,000 CSE cases

holding staffing levels and other factors constant, states with greater IV-D outlays would have larger denominators for the Cost-Effectiveness ratio.

To illustrate the magnitude of the coefficient, we calculated how much the Cost-Effectiveness measure would decline if a state went from 25th to the 75th percentile of the Ratio of IV-D Expenditures to State Personal Income. The model predicts that such a change would be associated with a 0.81 decline in the Cost-Effectiveness ratio, which is a sizeable effect given that the median Cost-Effectiveness ratio in 1997 was 4.2.

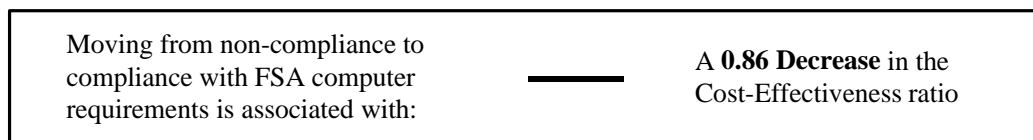
Figure 3: Statistically Significant Association between the Ratio of IVD-Expenditures to State Personal Income and Performance



c) Degree of Computer Automation

Compliance with the FSA computer requirements, which served as our proxy for computer automation, was negatively correlated with all but the composite index. However, we found a statistically-significant relationship in only one case — the Cost-Effectiveness variable. The finding is consistent with expectations because it is unlikely that in 1997 the spending related to computer systems was accompanied by sizable returns in collections, holding all other factors constant. In the short-run, compliance with the FSA requirements may be positively correlated with the denominator of the Cost-Effectiveness ratio (i.e., expenditures) but not correlated with the numerator (i.e., collections). Applying the estimated coefficient, the model suggests that complying with the FSA is associated with a decline in the Cost-Effectiveness ratio of 0.86.

Figure 4: Statistically Significant Association between Compliance with FSA Computer Requirements and Performance

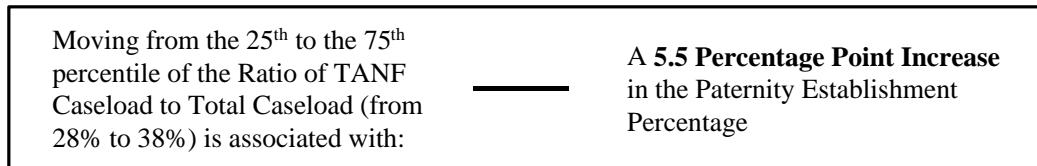


d) Ratio of TANF Caseload to Total Caseload in IV-D System

For five of the six models, we estimated a positive association between the proportion of CSE cases that receive TANF and CSE performance. The relationship is statistically significant in only one case — the Paternity Establishment Percentage. The model predicts that moving from the 25th to the 75th percentile of the Ratio of TANF Caseload to Total Caseload (from 28% to 38%) is associated with an increase in the Paternity Establishment Percentage of 5.5 percentage

points. This finding may run counter to our assumption that TANF cases are more difficult to serve than non-TANF cases. However, states with a high percentage of their caseload in the TANF program may have a greater need to direct resources toward paternity establishment, as paternity establishment drives both order establishment and collections in TANF cases.

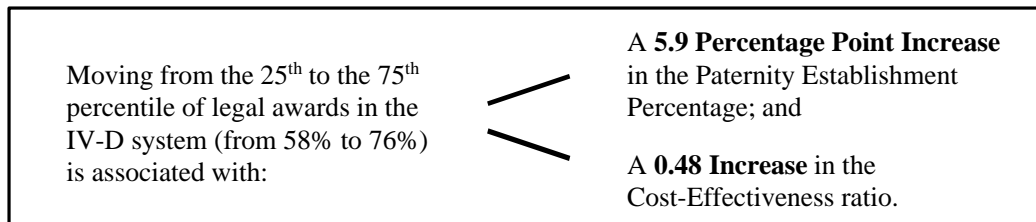
Figure 5: Statistically Significant Association between Ratio of TANF to Total Caseload and Performance



e) Measure of Program Universality

We estimated a positive relationship between our measure of program universality and performance in five of the six models; two of those relationships were statistically significant. Specifically, moving from the 25th percentile of program universality (i.e., 58 percent of legal orders in the IV-D system) to the 75th percentile of program universality (i.e., 76 percent of legal orders in the IV-D system) is associated with an increase in the Paternity Establishment Percentage of 5.9 percentage points and an increase in the Cost Effectiveness ratio of 0.48.

Figure 6: Statistically Significant Associations between Program Universality and Performance



While our findings for program universality appear to be intuitive, they may seem inconsistent with the findings we just described for the proportion of cases receiving TANF. For example, we found that the more universal programs appear to have higher rates of in-hospital paternity establishment. A higher degree of universality would seem to imply a *lower* proportion of cases on TANF, which our model predicts would hurt paternity establishment efforts.

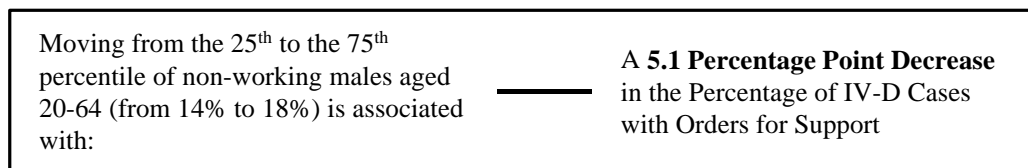
However, it is important to note that the numerator and denominator of our ratio of program universality only include cases with legal support awards, not cases with paternity determination only. Conversely, the numerator and denominator of our variable measuring the proportion of cases receiving TANF do include cases with paternity determination only. As such, it is not necessarily the case that a higher degree of program universality (or a higher proportion of legal awards in the IV-D system) implies a lower proportion of all IV-D cases (both with and without legal awards) on TANF.

The quality of the universality data may also be a cause of the inconsistent findings. The CPS-CSS is the source of the variable, and as mentioned previously, estimates for states with small populations are generally unreliable. Our data series for the universality measure exhibits little variance, with most states falling into a relatively narrow range around the median value of 70 percent. Additionally, we did not find a negative correlation with the proportion of cases receiving TANF, which is surprising. While the universality estimates could prove to be reasonable, our findings should be re-examined when more reliable data become available.

f) Percent of Males Aged 20-64 Not Employed

As expected, CSE performance was inversely related to the Percent of Males Aged 20-64 Not Employed (or the percent of males unemployed or out of the labor force) in the state, but we found statistical significance for only one measure — the Percentage of IV-D Cases with Orders for Support. In this example, an increase in the percent of males not employed from the 25th percentile (14 percent) to the 75th percentile (18 percent) is associated with a 5.1 percentage point drop in the Percentage of IV-D Cases with Orders for Support.

Figure 7: Statistically Significant Association between Percent of Males Aged 20-64 Unemployed or Out of the Labor Force and Performance



g) Percent of Births to Unmarried Mothers

In five out of six models, we estimated a negative association between the share of a state's births that were to unmarried mothers and CSE performance. However, the relationship was only statistically significant for the Composite Index. In that case, the model predicts a relative modest correlation. Specifically, a rise in state's unmarried-birth rate from the 25th percentile (28 percent) to the 75th percentile (34 percent) is associated in a drop in the Composite Index of 0.08 percentage points.

Figure 8: Statistically Significant Association between Percent of Births to Unmarried Mothers and Performance

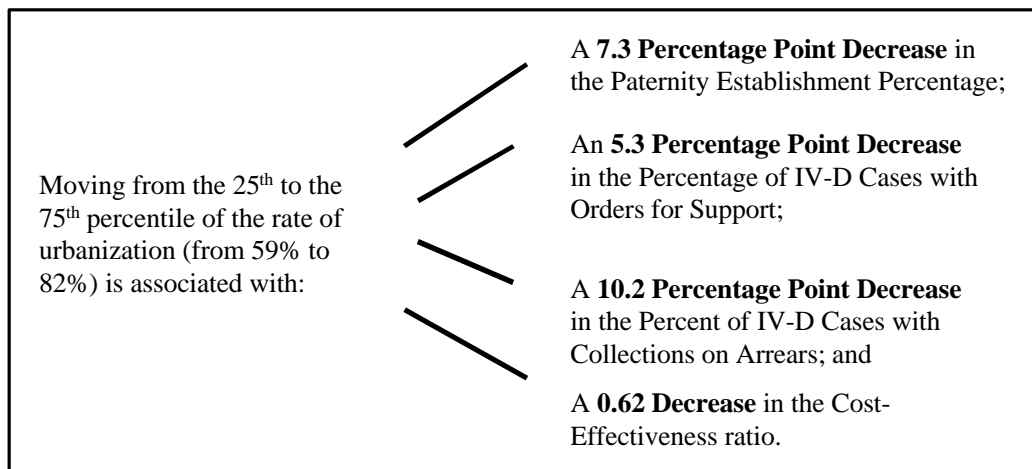


h) Percent of Population in Urban Area

Perhaps the most stable variable throughout our model-development process, the measure of urbanization, consistently showed a negative relationship with performance. We report a negative coefficient in all six models and statistical significance in four of the six. The variation in predicted CSE performance between states in the 25th percentile of the rate of urbanization (59 percent) to the 75th percentile of the rate of urbanization (82 percent) is sizable. The higher percent of population living in urban areas is associated with a 7.3 percentage point drop in the Paternity Establishment Percentage, a 5.3 percentage point decline in the IV-D Collection Rate for Current Support, a 10.2 percentage point decrease in the Percentage of IV-D Cases with Collections on Arrears, and an 0.62 drop in the Cost-Effectiveness ratio.

It is important to note, however, that these strong results for our measure of urbanization did not hold when we tested an alternate specification of the variable using a narrower definition of “urban area” (including only central cities and the adjacent densely settled urban fringe that together have a minimum of 50,000 persons.) We report our somewhat weaker results using this alternative variable in Appendix G.

Figure 9: Statistically Significant Associations between Percent of Population Living in Urban Areas and Performance



3. Variables Displaying No Statistically Significant Associations with State CSE Performance

We found no statistically significant relationships between the share of state expenditures financed with federal incentives and the performance measures. We also found no statistically significant relationship between the performance measures and the variable that measures county-level administration. The variable was very close to significance — at the ten-percent level — in three cases. The model suggested that county-level administration was associated with improvements in the IV-D Collection Rate for Current Support, as well as Cost-Effectiveness. On the other hand, we found a negative association between the measure of county-level administration and the Percentage of IV-D Cases with Collections on Arrears.

Table 1: Results of Multivariate Regressions

	Dependent Variables											
	1		2		3		4		5		6	
<i>Explanatory Variables</i>	Paternity Establishment Percentage		Percentage of IV-D Cases with Orders for Support		IV-D Collection Rate for Current Support		Percentage of IV-D Cases with Collections on Arrears		Cost-Effectiveness		Composite Index	
Share of State and Local IV-D Expenditures Financed with General Fund Appropriations	0.115		0.162	**	(0.010)		0.332	***	0.232		0.173	**
Share of State and Local IV-D Expenditures Financed with Federal Incentive Payments	0.024		0.092		(0.073)		0.079		(0.100)		0.095	
FTEs per Case	42.922	*	46.265	**	23.668		51.054		(106.034)		29.480	
Ratio IV-D Expenditures to State Personal Income	(57.208)		117.153		(54.621)		(196.727)		(2645.142)	**	90.439	
Share of State and Local IV-D Expenditures Administered at the County Level	(0.050)		(0.056)		0.113		(0.231)		1.235		(0.001)	
Compliance with Systems Requirements	(0.007)		(0.001)		(0.007)		(0.143)		(0.859)	*	0.012	
Proportion TANF Caseload	0.563	**	0.106		0.169		0.015		(1.532)		0.145	
Measure of Program Universality	0.337	**	0.022		0.085		(0.192)		2.743	**	0.151	
Percent Births to Unmarried Mothers	(0.006)		(0.005)		(0.001)		0.003		(0.042)		(0.014)	**
Population Ratio of Males Not Employed (Ages 20-64)	(1.150)		(1.319)	*	(0.766)		(0.803)		0.198		(1.371)	
Percent Population in Urban Area	(0.321)	**	(0.230)		(0.384)	***	(0.446)	*	(2.684)	**	(0.189)	
Adjusted R-sq.	0.414		0.436		0.252		0.150		0.325		0.334	
Number of State Observations	N=47		N=51		N=47		N=41		N=49		N=38	

* Significant at 10% Level

** Significant at 5% Level

*** Significant at 1% Level

V. SUMMARY OF MAJOR FINDINGS

This paper represents an initial attempt to associate programmatic and demographic characteristics of a IV-D program with its performance. By design, the analysis focused on the relationship between the means by which a state finances its IV-D program and CSE program performance. As money is fungible, it is not obvious why the sources of funding for CSE activities would have an impact on a state's CSE performance. However, rather than indicating the importance of a particular funding source, the means by which a state finances its IV-D program may serve as a proxy for other characteristics of the CSE program. For example, a high General Fund contribution may serve as a proxy for other factors such as strong IV-D management or a high level of confidence in and commitment to the program on the part of the legislative branch that may be associated with better state CSE performance. To isolate the relationship between program financing and other factors, we developed a regression model for each of OCSE's performance measures.

Our analysis points to a few preliminary associations between State Child Support Enforcement performance, financing structure, and other mediating variables. *However, this analysis is exploratory in nature and its results should be interpreted carefully.* The findings presented do not in any way suggest a cause and effect relationship between state CSE program performance and either the financing or other mediating variables. Problems associated with measures that are only proxies for program performance, data quality, missing variables, simultaneity and pre-test bias, and the fact that the analysis covers only a single point in time suggest that we should interpret our findings carefully. Moreover, as is demonstrated in various alternative specifications of our model presented in Appendices F and G of this report, our findings are extremely sensitive to the way in which we define our variables. Data quality will be improved as states are required to report the performance indicators under the Child Support Performance and Incentive Act of 1998 (HR 3130, P.L. 105-200) and federal audits of this data are performed. Nevertheless, this analysis is a good beginning, that if refined over time, may enhance our understanding of the factors that affect state CSE program performance.

Key Findings

The key findings that emerged from our analysis are discussed below. Please note that our findings reflect the state of the CSE program in federal FY 1997. Since this time the environment has changed dramatically. State CSE programs have moved to implement the provisions of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), TANF caseloads have dropped significantly due to a strong economy as well as welfare reform, and states have made considerable progress in implementing automated systems to streamline operations.

A greater reliance on general fund appropriations may be associated with somewhat better performance. We found states that rely more heavily on general funds tend to score better on two performance measures, the percentage of IV-D cases with orders for support and the percentage of IV-D cases with collections on arrears. We believe that the use of general funds may serve as a proxy for other characteristics of the IV-D program (e.g., quality of management, the legislative branch's interest in the program). We found no strong, systematic relationships between the use of federal incentive payments and the performance measures. As reliance on general fund appropriations is highly and negatively correlated with reliance on retained TANF

collections, we also found that states that rely more heavily on retained TANF funds tend to score less well on the percentage of cases with collections on arrears and the composite index of performance.

Several factors related to the structure of the IV-D program appear to be related to CSE performance. We estimated strong and positive relationships between staffing levels per case²⁷ and two performance measures (paternity establishment percentage and percentage of IV-D cases with orders for support). We also found that increased state spending relative to the total personal income, a measure of a state's propensity and fiscal capacity to invest in CSE activities, is associated with weaker performance on the cost-effectiveness measure.

The mix of cases within the IV-D caseload also appears related to performance. The models suggest that programs that are more universal in nature (that is, servicing a larger percentage of all cases with child support awards or agreements in the state) are more cost-effective and have higher rates of paternity establishment. We also found that IV-D caseloads that have a higher proportion of TANF recipients also exhibit higher rates of paternity establishment.

Several additional factors outside the domain of the IV-D program also appear to be related to CSE performance. Three factors — unmarried birth rates, ratio of males not employed, and level of urbanization — are negatively related to CSE performance. Specifically, we found a higher unmarried birth rate is associated with weaker overall performance, as measured by the composite index. We also estimated that as the ratio of males not employed increases, the percentage of CSE cases with orders falls. Finally, states with larger urban populations report weaker CSE performance in four areas (i.e., paternity establishment, collection rate for current support, collection rate for past-due support, and cost-effectiveness). These latter results, however, are not robust for alternate specifications of the urbanicity variable (see Appendix G). Given that these factors are outside the domain of the IV-D program, our preliminary findings underscore Congressional concerns in HR 3130 (P.L. 105-200) about the effect of non-CSE variables on state performance.

States may face tradeoffs in attempting to maximize their overall performance. There appears to be tradeoffs between cost-effectiveness and the other performance measures. This suggests that increasing staffing levels in an attempt to strengthen performance may also increase spending, which could decrease cost-effectiveness. This may be especially true if the new spending/staff are devoted to paternity establishment efforts, which do not generate collections in the short run.

On the whole, performance measures do not appear to move in concert. Other than tradeoffs related to cost-effectiveness, we found few strong relationships between the performance measures. Put differently, it does not appear that improvement on one measure will automatically translate into an improvement or worsening of another measure. Exceptions include the positive and strong correlation we measured between the paternity-establishment percentage and the percent of cases with orders indicators and the positive, albeit somewhat weaker, correlation between the percent of cases with orders and the collection rate for current support.

²⁷ Note that staffing level per case DOES NOT reflect the caseload of front-line workers, but the caseload of all IV-D staff combined.