

**Child Support Noncustodial
Parent Employment
Demonstration (CSPED):
Findings from the
Benefit-Cost Analysis**



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Benefit-Cost Analysis Findings from the Child Support Noncustodial Parent Employment Demonstration (CSPED)

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Executive Summary

Introduction

In recent decades, changes in family structure have led to a substantial increase in single-parent households in the United States. As a result of high divorce rates and a growing proportion of births to unmarried parents (Cancian, Meyer, and Han, 2011), almost a third of children did not live with both parents in 2016 (U.S. Census Bureau, 2017). The child support program is designed to address one of the potential negative consequences of children living apart from one of their parents by ensuring that noncustodial parents contribute financially to their upbringing. Changes in the social safety net, which no longer includes an entitlement to cash assistance for low-income single parents, have increased the importance of reliable child support. However, many noncustodial parents, including a disproportionate share of those whose children live in poverty, have limited earnings and ability to pay child support. Additionally, child support orders often constitute a high proportion of their limited income (Meyer, Ha, and Hu, 2008; Takayesu, 2011). Children in single-parent households could therefore benefit from a child support program that enables, as well as enforces, noncustodial parents' contributions to their support (Mincy and Sorensen, 1998).

In Fiscal Year 2012, the Office of Child Support Enforcement (OCSE) within the Administration for Children and Families, U.S. Department of Health and Human Services (DHHS), used its grant-making authority under Section 1115 of the Social Security Act to launch the National Child Support Noncustodial Parent Employment Demonstration (CSPED). As described in the program's Funding Opportunity Announcement (FOA; DHHS, 2012),¹ OCSE sought to examine the effectiveness of child support-led employment programs for noncustodial parents. The goal of CSPED was to improve the reliable payment of child support in order to improve child well-being and avoid public costs.

OCSE competitively awarded a cooperative agreement to the Wisconsin Department of Children and Families (DCF) to procure and manage an evaluation of CSPED through an independent third-party evaluator. DCF chose the Institute for Research on Poverty at the University of Wisconsin–Madison, along with its partner Mathematica Policy Research, to conduct the evaluation. The Institute for Research on Poverty also partnered with the University of Wisconsin Survey Center, which worked in conjunction with Mathematica Policy Research to collect data from study participants. This report presents the findings from the analysis of the effects of the CSPED intervention, an analysis based on a random assignment research design.

Program Design

CSPED aimed to improve the reliable payment of child support by providing noncustodial parents behind in their child support with an integrated set of child support, employment, and parenting services, through a child-support-led program. Local child support agencies were the lead agency and they contracted with partners to provide employment and parenting services.

¹https://ami.grantsolutions.gov/files/hhs-2012-acf-ocse-fd-0297_0.pdf

OCSE laid the groundwork for the CSPED design through the FOA (DHHS, 2012), which specified that programs were to consist of the following core services:

- **Case management.** Each CSPED participant was to be assigned a case manager to assess their needs, assist them in obtaining services, and monitor their progress.
- **Enhanced child support services.** OCSE directed grantees to offer expedited review of child support orders, order modification if appropriate, and temporary abeyance of certain enforcement tools while participants were actively engaged in the program. In addition, OCSE encouraged CSPED grantees to negotiate potential reductions in past-due amounts owed to the government (state-owed arrears) when participants successfully met program goals.
- **Employment.** OCSE expected all programs to include job search assistance, job readiness training, job placement services, job retention services, and rapid re-employment services immediately following job loss. OCSE also encouraged grantees to include: short-term job skills training, on-the-job training, vocational training, education directly related to employment, and work supports, such as transportation assistance.
- **Parenting.** CSPED grantees were to provide 16 hours of parenting classes with peer support that covered personal development, responsible fatherhood, parenting skills, relationship skills, and domestic violence.

Grantees were also required to develop a domestic violence plan, in consultation with domestic violence experts. These domestic violence plans included staff training, a process for screening CSPED participants, referral resources for participants involved in domestic violence, and family violence safeguards.

In fall 2012, OCSE competitively awarded grants to child support agencies (or their umbrella agency) in eight states (California, Colorado, Iowa, Ohio, South Carolina, Tennessee, Texas, and Wisconsin). Grantees chose a total of 18 implementation sites, ranging from one county each in Ohio, Iowa, and California to five counties in Colorado.

OCSE required that grantees enroll participants who had established paternity, were being served by the child support program, and were either not regularly paying child support or were expected to have difficulty making payments due to lack of regular employment. Using these eligibility criteria, grantees set out to find and recruit eligible noncustodial parents. Recruitment into the CSPED study began in October 2013 and continued through September 2016.² Recruitment efforts culminated in grantees enrolling 10,161 eligible noncustodial parents into the study.

²Random assignment and enrollment into the CSPED study ended in September 2016, and CSPED grantees continued to provide CSPED services to program participants through September 2017. CSPED programs received no-cost extensions, which some grantees used to enroll noncustodial parents into services outside of the CSPED evaluation until September 2018. These additional enrollees were not part of the CSPED study and any such service activities were not documented, tracked, or analyzed for the evaluation.

CSPED grantees enrolled a disadvantaged group of noncustodial parents. Only 55.2 percent had worked in the month prior to random assignment. Among those who reported working, their average monthly earnings were below the poverty threshold for a single person. Less than a third had more than a high school education. Most (65 percent) had been incarcerated.

Many noncustodial parents had complex family responsibilities. Most (62.2 percent) had children with more than one partner. Most (57.2 percent) reported that they did not pay any child support in the 30 days prior to random assignment. About 40 percent had no in-person contact with their youngest or oldest nonresident children in the 30 days prior to random assignment.

Study Methods

The CSPED evaluation used a random assignment research design. At study enrollment, program applicants were randomly placed into one of two research groups: (1) an extra services group that was eligible for CSPED services; or (2) a regular services group that was not. Study participants were divided equally across the two groups. A random assignment design ensures that the initial characteristics of the research groups are very similar. Therefore, any differences between the groups in outcomes can be attributed to the effect of the program.

The CSPED evaluation has three components, each of which is documented in separate reports: (1) an implementation study, which included an interim report (Paulsell et al., 2015) and a final report (Noyes, Vogel, and Howard, 2018); (2) an impact study (Cancian, Meyer, and Wood, 2019a; Cancian et al., 2019b); and (3) this report, which presents findings from the benefit-cost study. A separate report provides detailed information about the demographic characteristics of CSPED participants (Cancian et al., 2018).

Service Receipt

The final impact and implementation reports (Cancian et al., 2019a; Noyes et al., 2018) describe how CSPED provided significantly more services across all dimensions examined—including case management, enhanced child support, employment, and parenting—than received by the regular services group. In the year after study enrollment, those in the extra services group reported receiving, on average, 37 hours of child support, employment, or parenting services, compared with 15 hours for those in the regular services group, a difference of 22 hours. These additional hours of reported service receipt include 14 additional hours of employment services (including a mix of job readiness classes and one-on-one employment help), seven additional hours of parenting services, and one additional hour of child support services.

Our analysis of administrative data indicates that CSPED also increased the likelihood that noncustodial parents had their orders modified or had automatic wage withholding established during their first year in the program. In addition, consistent with the program design, CSPED reduced the likelihood that noncustodial parents experienced punitive enforcement actions—such as contempt hearings, warrants issued, or driver’s license suspensions—during their first year in the program. These differences persisted for license suspension into the second year of the program, but they did not persist into the second year for other punitive enforcement measures. As described in the CSPED final implementation report, OCSE gave grantees flexibility in designing their programs with respect to the noncustodial parents they served, how they

implemented services, and the dosage of services that were offered. As a result, the package of services and amount of services that participants experienced ultimately differed across sites (Noyes et al., 2018).

Program Impacts

The final impact report (Cancian et al., 2019a) describes in detail whether CSPED was effective in improving the outcomes it was designed to influence. CSPED had statistically significant impacts in five of the seven key domains examined by the impact report. CSPED reduced child support orders, which was consistent with its intent of right-sizing orders for low-earning parents. Payments declined by a smaller amount. In addition, CSPED participants reported more positive attitudes toward the child support program and a greater sense of financial responsibility for children. They also experienced improvements in earnings during the first year after random assignment. However, it did not have a statistically significant impact on two key domains—compliance with current support orders, or the amount or length of employment, and earnings impacts did not persist into the second year.

The Benefit-Cost Report

This benefit-cost report summarizes program costs and benefits to the extent possible, and thus offers insight about the magnitude of the CSPED costs relative to the magnitude of the benefits. Put another way, this benefit-cost analysis can provide information about the overall benefits and costs of CSPED, as well as how these are distributed across different stakeholders.

The benefit-cost framework focuses on benefits and costs that can be measured in monetary terms. Both the benefits and costs are estimated by comparing the benefits and costs of providing CSPED extra services relative to providing regular services. Program benefit estimates were based on impact estimates, which measured the benefit of the extra CSPED services relative to the regular services condition. The benefit-cost analysis includes impact estimates regardless of whether they are statistically different from zero because they represent our best estimate of impact size.

Data used in the benefit-cost report come from a variety of sources, including administrative data from each grantee on child support, public assistance program participation, and criminal justice involvement. Administrative data on employment and earnings from the National Directory of New Hires (NDNH), a follow-up survey of program participants conducted about 12 months after random assignment, the CSPED management information system, web-based staff surveys, and programs' reports of their business-as-usual child support costs were also used.

CSPED affected multiple stakeholders, and the benefit-cost analysis enables us to distinguish how costs and benefits were distributed across these stakeholders. Because the distinction between benefits and costs is dependent on whose perspective we consider, we examined the benefits and costs from four perspectives, those of (1) the government, (2) custodial parents and children, (3) noncustodial parents, and (4) society as a whole (sum of 1–3).

Although this framework captures many important benefits considered for CSPED—such as impacts on child support payments and noncustodial parent employment and earnings—it does

not capture all outcomes CSPED could possibly influence. Many of these excluded outcomes—such as attitudes toward the child support system—are key CSPED goals. For this reason, these measures were included in the impact analysis. However, because it is difficult to place a monetary value on these measures, we omit them from the benefit-cost analysis. Other excluded outcomes, such as child well-being, were not measured in the impact analysis at all, and therefore cannot be monetized. The potential impact of CSPED on these excluded outcomes should be kept in mind when interpreting the net-benefit estimates.

Key Findings

The key findings from this report about program costs are as follows:

- The estimated cost to operate CSPED for one year was \$4,617,096 across the eight grantees. Our estimate incorporates the market value of all resources used to operate the program and deliver services. The additional cost of CSPED after subtracting the cost of providing “business-as-usual” child support services was \$4,368,720.
- The average cost of serving a CSPED participant in the program was \$2,647. Our estimate of providing child support services to the regular services group was \$142 per participant. This makes the additional cost of CSPED \$2,505 per participant relative to the costs of providing business-as-usual child support services.
- Labor expenses represented the largest share of program costs. About 90 percent of the total estimated cost went toward salaries and fringe benefits for CSPED staff members. Program services, including state-owed arrears compromise, license reinstatement, participant incentives, and work supports, composed about 10 percent of the total estimated cost.

The key findings from this report about program benefits are as follows:

- During the two-year period for which we have data on participant outcomes, the total estimated benefit of CSPED relative to business-as-usual for the study’s steady state cohort of 1,744 participants was \$2.9 million from the perspective of society, not accounting for program costs.
- Not accounting for program costs, CSPED benefited society by \$971 per participant relative to the regular services group during the first year after random assignment and by \$692 per participant during the second year after random assignment, totaling \$1,663 per participant over the two-year period.
- Custodial parents and children benefited from CSPED by \$379 and \$473 per participant in the first and second years, respectively, totaling \$852 over the two years. Neither of these estimates is statistically different from zero. Increased child support, increased earnings, and increased public welfare were factors in generating these benefits.
- CSPED benefited noncustodial parents by \$386 per participant, on average, in the first year after random assignment and by \$160 per participant, on average, in the second year

after random assignment, totaling \$546 over the two-year follow-up. These values are not statistically significantly different from zero. These benefits accrued in part from increased noncustodial parent earnings and fringe benefits and increased noncustodial parent SNAP receipt.

- From the government's perspective, CSPED generated about \$207 in benefits per participant in the first year after random assignment and \$37 per participant in the second year after random assignment (not accounting for program costs), totaling \$244, although neither value is statistically significantly different from zero. A major factor in generating these benefits was the reduction in child support enforcement activities.

The key findings from this report regarding the net benefit of this program are as follows:

- When evaluated over the two-year follow-up period for which we have data, the net benefit analysis indicates that CSPED benefited custodial parents and children and noncustodial parents, but these benefits did not outweigh the costs to the government of operating CSPED relative to providing regular child support services (see Table ES.1).
- When extrapolating the second year benefits through a 10-year period (going eight years beyond the follow-up period for which we have data), given reasonable assumptions about how benefits decline over time, our estimates show that the benefits of CSPED might outweigh the program operation costs.

Both custodial parents and children as well as noncustodial parents experienced benefits from CSPED, primarily related to small increases in child support receipt, employment-related benefits, and receipt of SNAP benefits, most of which were not statistically significant. From the government's perspective, CSPED had costs associated with operating the program and it increased SNAP benefits for custodial and noncustodial parents, but it also led to a substantial reduction in costs related to child support enforcement activities. Taking the perspectives of society as a whole (government, custodial parents and children, and noncustodial parents combined), the benefit-cost analysis indicates that CSPED cost society \$528 per CSPED participant over the two-year follow-up period (Table ES.1).

A limitation of the main benefit-cost estimates is that the cost estimates include only the cost of providing CSPED and business-as-usual child support services. They do not include the cost of employment and parenting services provided to extra services group members through programs other than CSPED, nor do they account for employment and parenting services provided to regular service group members in the business-as-usual environment. We do not have cost data for programs outside of CSPED that provided services to study participants. However, we do have data from the follow-up survey about services received by both the regular and extra services groups. These data have important limitations—they do not provide information about the type of services beyond broad categories and the cost of such services is not known. In addition, in reporting hours of service participation, respondents do not distinguish between services provided by CSPED versus other programs, and report only the recalled time spent in services (not the time that it takes for program staff to deliver a service).

Table ES.1. Estimates of net benefits (in monetary terms) per CSPED participant in two years after random assignment, by perspective, in 2017 dollars

Benefits or costs	Perspective			
	Government	CPs and children	NCP participants	Society
Per participant				
Costs of CSPED extra services relative to regular services				
Through the end of the first year after random assignment				
Total benefits	-\$2,505	\$0	\$314	-\$2,191
Net benefits	\$207	\$379	\$386	\$971
Net benefits per dollar of program expenditures	-2,298	379	700	-1,220
Through the end of the second year after random assignment				
Total benefits	-0.92	0.15	0.28	-0.49
Net benefits	\$244	\$852	\$546	\$1,663
Net benefits per dollar of program expenditures	-2,261	852	860	-528
Extrapolations of second year after random assignment benefits over a 10-year period				
Total benefits	-0.90	0.34	0.34	-0.21
Net benefits	\$328	\$1,933	\$912	\$3,246
Net benefits per dollar of program expenditures	-2,177	1,933	1,226	1,055
For all participants in CSPED steady-state cohort^a				
Costs of CSPED extra services relative to regular services				
Through the end of the first year after random assignment				
Total benefits	-\$4,368,720	\$0	\$546,616	-\$3,821,104
Net benefits	\$361,514	\$661,778	\$672,731	\$1,693,110
Through the end of the second year after random assignment				
Total benefits	-4,007,206	661,778	1,220,347	-2,127,994
Net benefits (Sum of total benefits for the first and second years after random assignment)	\$425,472	\$1,486,205	\$952,196	\$2,900,452
Extrapolations of second year after random assignment benefits over a 10-year period				
Total benefits	-3,943,248	1,486,205	1,499,812	-920,652
Net benefits	\$571,748	\$3,371,724	\$1,591,352	\$5,661,721
	-3,796,972	3,371,724	2,138,968	1,840,617

Notes: The societal perspective is the sum of the perspectives of (1) government, (2) custodial parents and their children, (3) noncustodial parents, and (4) victims of crime. The perspective victims of crime is not shown separately in this table. Net benefit amount is estimated by adding impacts on the different total benefits and total costs. Based on regressions of net-benefit outcomes, net benefits in the first year after random assignment from the perspective of government and society are both statistically significant. Statistical regression tests for cumulative net benefits through the end of the second year after random assignment are not informative for the estimates reported in this table because the first and second year estimates are based on different samples, thus we do not report test of statistical significance for these estimates.

^aBased on 1,744 annual participants.

With these caveats in mind, we are able to use this information to construct rough estimates of the net benefits of CSPED that account for the cost of services available in the business-as-usual environment beyond child support services. To calculate these estimates, we have to make a number of assumptions. Specifically, we assume that all types of services cost the same per hour of service receipt regardless of who provides them and what type of services they are. We also assume that all services cost as much as CSPED per hour of service received. In addition, we assume that extra services group members did not receive any services outside of CSPED, and to the extent they did, likely understates the difference in costs received by the extra services and regular services groups. These estimates suggest CSPED would yield a benefit to society after two years of \$296 per participant. Thus, this approach suggests that taking into account the costs of a broader range of service receipt might provide a more favorable cost-benefit estimate.

The net benefit estimates for CSPED are also more favorable when extrapolating results beyond the two-year period for which we have data. Under the assumption that the CSPED benefits decline at 29 percent per year (as they did from the first to second year after random assignment) over a 10-year period after enrollment, extrapolations indicate that the total estimated net benefit of CSPED to society would be \$1,055 per participant or about \$1.84 million across all participants in the CSPED steady state cohort, if we use our more limited estimate of business-as-usual costs. These projected estimates suggest that CSPED's monetary benefits might justify its costs over a longer term than covered by the study's follow-up data.

As discussed above, CSPED had several impacts on key outcomes that the benefit-cost analysis was not able to value. This is often the case in programs that seek to target attitudes and quality of relationships as these outcomes have no accepted market values on which to base an analysis. Among the outcomes CSPED aimed to affect, CSPED increased noncustodial parents' satisfaction with the services of the child support program, it increased noncustodial parents' sense of responsibility for their children, and it increased noncustodial parents' contact with their children. CSPED also led to a modest reduction in housing instability for noncustodial parents. These positive impacts were not able to be monetized, and may have generated benefits to custodial parents and children, noncustodial parents, and society as a whole. In addition, CSPED may have affected outcomes not measured by the evaluation, such as children's developmental outcomes. These unmeasured benefits, along with the observed, modest impacts on excluded, nonmonetary outcomes for custodial parents and children and noncustodial parents, are potential benefits of CSPED that are not represented in the benefit-cost analysis. Policymakers should consider these factors in conjunction with the monetary net benefit estimates in determining whether the observed and potential impacts of the program justify the cost of the program to government.

CSPED Overview

Introduction

In recent decades, changes in family structure have led to a substantial increase in single-parent households in the United States. As a result of high divorce rates and a growing proportion of births to unmarried parents (Cancian et al., 2011), almost a third of children did not live with both parents in 2016 (U.S. Census Bureau, 2017). The child support program is designed to address one of the potential negative consequences of children living apart from one of their parents by ensuring that noncustodial parents contribute financially to their upbringing. Changes in the social safety net, which no longer includes an entitlement to cash assistance for low-income single parents, have increased the importance of reliable child support. For example, in 2015, 37 percent of children with a parent living outside of the household lived in poverty. For custodial parents living in poverty who received all of the child support owed to them, child support made up 58 percent of their personal income (Grall, 2018). However, many noncustodial parents, including a disproportionate share of those whose children live in poverty, have limited earnings and ability to pay child support. Additionally, child support orders often constitute a high proportion of their limited income (Meyer et al., 2008; Takayesu, 2011). Children in single-parent households could therefore benefit from a child support program that enables, as well as enforces, noncustodial parents' contributions to their support (Mincy and Sorensen, 1998).

In Fiscal Year 2012, the Office of Child Support Enforcement (OCSE) within the Administration for Children and Families, U.S. Department of Health and Human Services (DHHS), used its grant-making authority under Section 1115 of the Social Security Act to launch the National Child Support Noncustodial Parent Employment Demonstration (CSPED). As described in the program's Funding Opportunity Announcement (FOA; DHHS, 2012),³ OCSE sought to examine the effectiveness of child support-led employment programs for noncustodial parents. The goal of CSPED was to improve the reliable payment of child support in order to improve child well-being and avoid public costs.

Also in 2012, OCSE competitively awarded a cooperative agreement to the Wisconsin Department of Children and Families (DCF) to procure and manage an evaluation of CSPED through an independent third-party evaluator. The Wisconsin Department of Children and Families chose the Institute for Research on Poverty at the University of Wisconsin–Madison, along with its partner Mathematica Policy Research, to conduct the evaluation. The Institute for Research on Poverty partnered with the University of Wisconsin Survey Center to undertake data collection efforts with study participants in conjunction with Mathematica Policy Research.

This report presents findings from the CSPED benefit-cost analysis. The goal of the benefit-cost framework is to offer a systematic way to assess the costs of the CSPED program and to place a value on the benefits. Such an analysis can provide important insights into one aspect of whether the program “works,” by offering estimates of the measurable program benefits and costs. The benefit-cost analysis is informed by the impact report (Cancian et al., 2019a), but was fundamentally distinct in important ways. The CSPED impact analysis evaluated whether

³https://ami.grantsolutions.gov/files/hhs-2012-acf-ocse-fd-0297_0.pdf

CSPED was effective in improving the outcomes it was designed to influence. The benefit-cost analysis summarizes program costs and benefits, and thus offers insight about the magnitude of the costs relative to the magnitude of the benefits. Put another way, this benefit-cost analysis provides information to inform deliberations about whether CSPED was effective enough to justify its costs.

The benefit-cost analysis is based on a framework common to program evaluations, described in Karoly (2008) and used in numerous benefit-cost analyses of other employment-related programs (JobCorps, McConnell and Glazerman, 2001; WIA training vouchers, Perez-Johnson, Moore, and Santillano, 2011). The framework calculates the benefits and costs of CSPED from the following perspectives: government, noncustodial parents, custodial parents and children, and society as a whole. Estimates of program costs were based on cost data collected using web-based time-use staff surveys, semi-structured staff interviews conducted during the second round of site visits, survey data, the Grantee Management Information System (GMIS), and child support administrative records. Estimates of program benefits were derived primarily from the analysis of administrative and survey data.

The benefit-cost framework focused on costs and benefits that have measurable, economic market values. In some cases, we were able to convert costs or program impacts to dollar values using information available from published sources or administrative information. For example, we converted impacts on criminal outcomes using published data on the costs of various legal proceedings. In other cases, the analysis relied solely on CSPED-specific information. For example, we converted staff time allocated to case management to a dollar value using information collected during the second round site visits on staff hourly wages. However, consistent with other benefit-cost studies, this analysis excluded intangible, subjective, hard-to-value benefits, such as any improvement in the quality of life for participants and their families.

Background and Related Research

OCSE laid the groundwork for the CSPED design through the FOA (DHHS, 2012), which specified that programs were to consist of the following core services:

1. **Case management.** Each CSPED participant was to be assigned a case manager to assess their needs, assist them in obtaining services, and monitor their progress.
2. **Enhanced child support services.** OCSE directed grantees to offer expedited review of child support orders, order modification if appropriate, and temporary abeyance of certain enforcement tools while participants were actively engaged in the program. In addition, OCSE encouraged CSPED grantees to negotiate potential reductions in past-due amounts owed to the government (state-owed arrears) when participants successfully met program goals.

3. **Employment.** OCSE expected all programs to include job search assistance, job readiness training, job placement services, job retention services, and rapid re-employment services immediately following job loss. OCSE also encouraged grantees to include: short-term job skills training, on-the-job training, vocational training, education directly related to employment, and work supports, such as transportation assistance.
4. **Parenting.** CSPED grantees were to provide 16 hours of parenting classes with peer support that covered personal development, responsible fatherhood, parenting skills, relationship skills, and domestic violence.

Grantees were also required to develop a domestic violence plan, in consultation with domestic violence experts. These domestic violence plans included staff training, a process for screening CSPED participants, referral resources for participants involved in domestic violence, and family violence safeguards.

OCSE required applicants to develop child support-led program models, with parenting and employment services delivered through partners with expertise in those domains. OCSE described the target population as noncustodial parents involved with the child support program who were not regularly paying child support, or who were expected to have difficulty paying, due to lack of regular employment.

OCSE constructed these required program elements based on findings from previous demonstrations. The FOA (DHHS, 2012) particularly emphasized three prior studies: (1) the *Parents' Fair Share* demonstration, implemented at multiple sites from 1994 through 1996; (2) the *Strengthening Families Through Stronger Fathers Initiative*, piloted from 2006 through 2009 in New York State; and (3) the state of Texas's *Noncustodial Parent (NCP) Choices* program, which began in 2005.

As described in the FOA (DHHS, 2012), each of these programs aimed to increase low-income fathers' earnings, involvement in their children's lives, and child support payments. *Parents' Fair Share* provided employment and training services; parenting classes with peer support; mediation; and enhanced child support services to program participants. The evaluation contained two random assignment studies. In the first, noncustodial parents of welfare participants thought to be unemployed and behind in their payments were randomly assigned to receive extra outreach to determine eligibility. The parents who received extra outreach were subject to increased enforcement actions and paid more child support. In the second random assignment study, among those who were found to be eligible (i.e., unemployed and not making payments), the program did not have an impact on employment or earnings for the entire sample (Miller and Knox, 2001). However, it did increase employment rates and average earnings among noncustodial fathers with low education levels and limited prior work experience. Noncustodial parents who received program services had a higher payment rate than noncustodial parents in the control group (45 percent versus 40 percent), though child support payment amounts were not significantly different between the two groups (Miller and Knox, 2001).

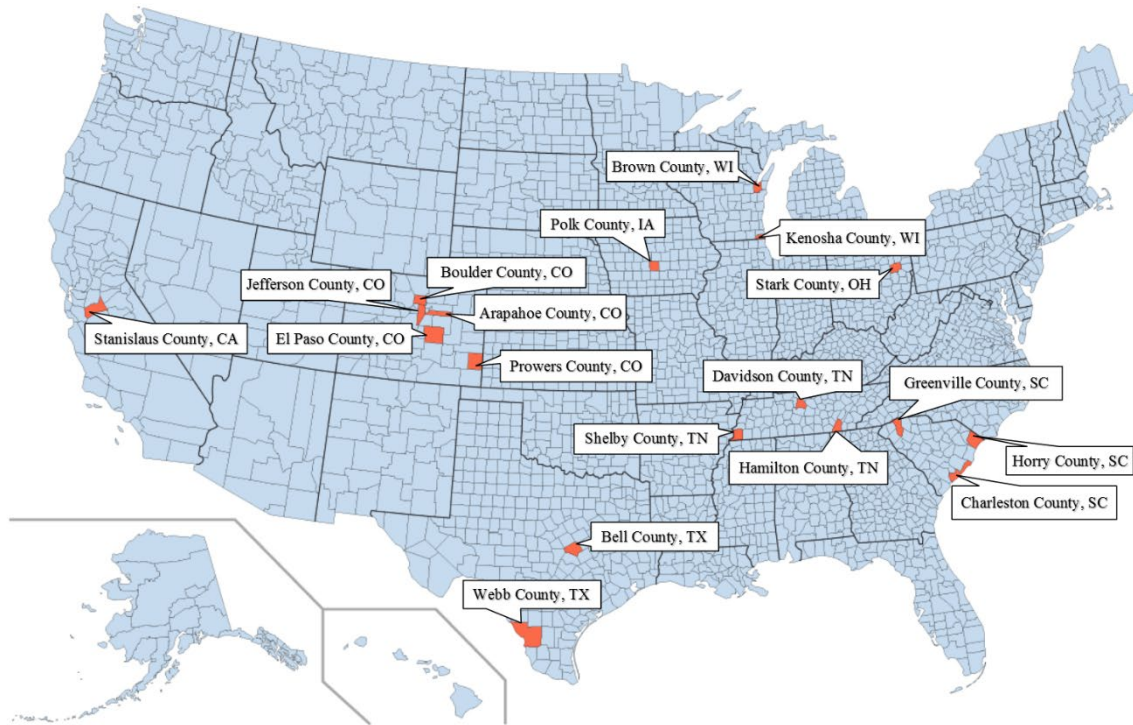
The more recent *Strengthening Families Through Stronger Fathers Initiative* provided case management, employment-related services, child support-related services, and parenting and

relationship classes to program participants. A nonexperimental evaluation contrasted outcomes of those in the program to a regular services group with similar characteristics. One year after enrollment, the wages of program participants were 22 percent higher than the wages of the regular services group, and participants paid 38 percent more in child support (Sorensen and Lippold, 2012).

The *Noncustodial Parent (NCP) Choices* program in Texas also aimed to help noncustodial parents overcome barriers to employment and increase the consistency of child support payments by ordering noncustodial parents in contempt of court for nonpayment of child support to participate in employment services. The program's nonexperimental evaluation found that one year after entry into the program, monthly child support collection rates from the NCP Choices program group were 47 percent higher than a matched regular services group, and monthly payments among the program group were \$57 higher on average than the regular services group. NCP Choices participants also paid child support more regularly than the regular services group. Significant differences between the groups in these domains persisted two to four years after enrollment (Schroeder and Doughty, 2009).

Program Design

To build upon these prior demonstrations, OCSE launched CSPED in fall 2012 and competitively awarded grants to child support agencies in eight states (California, Colorado, Iowa, Ohio, South Carolina, Tennessee, Texas, and Wisconsin). Grantees chose a total of 18 implementation sites, ranging from one county each in Ohio, Iowa, and California to five counties in Colorado (Figure 1). The locations were not selected to be nationally representative.

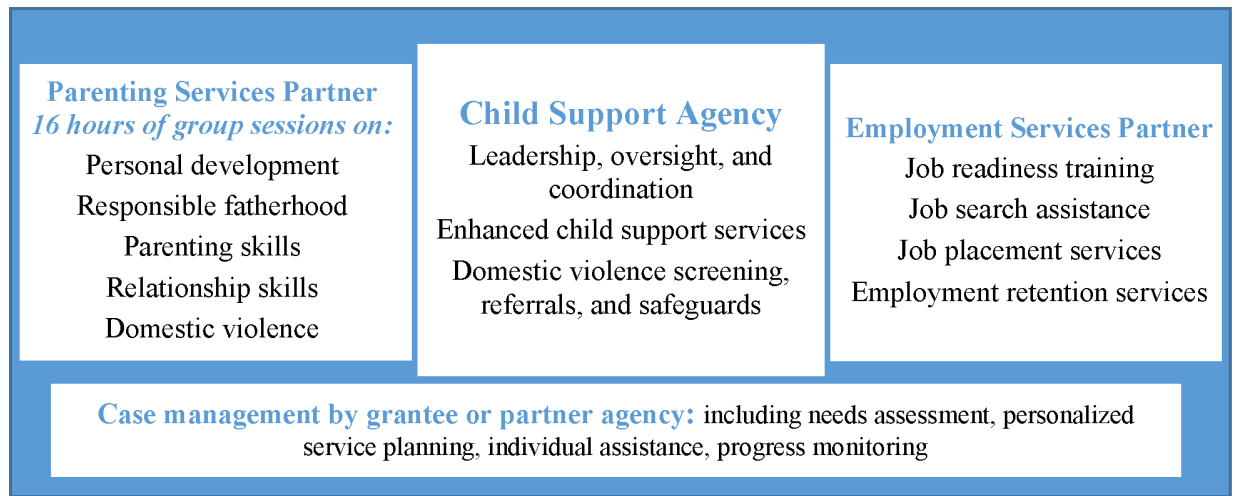
Figure 1. CSPED implementation sites

As detailed in the implementation report (Noyes et al., 2018), the FOA (DHHS, 2012) required that the child support agency provide leadership for CSPED. The local child support agency in each implementation site was the lead agency. Each grantee designated an overall project lead, who served as the main champion for CSPED within the grantee agency, and communicated policy set by OCSE to CSPED staff and partners. In some sites, the project lead also functioned as the project manager; in others, a second individual was assigned these responsibilities. The project manager, which was a position required by the FOA, was responsible for overseeing day-to-day operations and managing partner relationships. These staff oversaw the work of child support staff within the child support agencies, and the work of site managers in grantees with multiple sites. Child support staff were responsible for providing enhanced child support services and, in most grantees, case management services.

The FOA (DHHS, 2012) also required that grantees collaborate with and provide grant funding to partner agencies to administer employment, parenting, and domestic violence services. Each partner had a director, responsible for coordinating with the grantee on service implementation. These partnerships were crucial to CSPED's design and implementation.

Grantees provided four core services: (1) case management, (2) enhanced child support, (3) employment, and (4) parenting. These elements are summarized in Figure 2, and discussed below.

Figure 2. CSPED program model: Key elements



Case management. Each CSPED participant was to be assigned a case manager to assist them in obtaining the services they needed and assure that they followed through with the program. Case managers were expected to assess participants’ needs, develop personalized service plans, provide individualized assistance to participants throughout their time with the program, and monitor participant progress. Case managers were also expected to work with the program’s partners to assure that participants received the right mix of services. Grantees assigned at least one case manager to each CSPED participant. Case management services were provided by child support staff, partner staff, or across both agencies. In most grantees, child support workers provided primary case management services. In three grantees, partner staff were primarily responsible for case management (Noyes et al., 2018).

Enhanced child support services. CSPED was designed to offer a package of enhanced child support services to promote reliable payment of child support. OCSE directed grantees to include expedited review of child support orders, order modification if appropriate, and temporary abeyance of certain enforcement tools while participants were actively engaged in the program. In addition, OCSE encouraged CSPED grantees to negotiate potential reductions in state-owed arrears⁴ in exchange for successful program outcomes.

Employment. Employment services were intended to help noncustodial parents obtain and keep stable employment. The services participants received were to be based on their needs and the design of their programs. OCSE expected all programs to include job readiness training, job search assistance, job placement services (including job development and ongoing engagement with employers), job retention services for both the noncustodial parent and the employer, and rapid re-employment services immediately following job loss. OCSE also encouraged grantees to

⁴Past-due support (arrears) can be owed to the family or to the government.

include: short-term job skills training, on-the-job training, vocational training, education directly related to employment, and work supports, such as transportation assistance.

Parenting. CSPED parenting services were intended to promote positive child support outcomes by addressing the importance of being a responsible parent. They were to consist primarily of providing parenting classes with peer support. A specific curriculum was not required, but the curriculum had to include the following topics: personal development, responsible fatherhood, parenting skills, relationship skills, and domestic violence. All parenting curricula had to be approved by OCSE and the parenting component of programs was expected to include 16 hours of instruction.

Grantees also provided screening and assessments for domestic violence, as well as referrals for services. Some grantees also provided services additional services, such as services related to financial education and parenting time. All grantees adapted service delivery strategies to align with their local contexts and participant needs.

CSPED Eligibility, Recruitment, and Enrollment

OCSE required that grantees enroll participants who had established paternity, were being served by the child support program, and were either not regularly paying child support or were expected to have difficulty making payments due to lack of regular employment. It also recommended additional eligibility criteria. OCSE’s guidance provided a common framework from which grantees operationalized their own definitions of key terms provided in the OCSE guidance. As detailed in the implementation reports (Noyes et al., 2018; Paulsell et al., 2015), some grantees added to or modified OCSE’s recommended eligibility criteria prior to the start of enrollment; some grantees modified their eligibility criteria after random assignment began.

Using these eligibility criteria, grantees set out to find and recruit eligible noncustodial parents. All grantees except South Carolina began enrolling participants in the last quarter of 2013; South Carolina began in June 2014. Study enrollment ended for all grantees on September 30, 2016.⁵ Grantees used a variety of approaches to recruit study participants, including referrals from child support staff, the courts, and other agencies as well as through direct recruitment methods such as letters and phone calls from grantee staff. Grantees refined their recruitment strategies over the first year to boost enrollment numbers.

Recruitment efforts culminated in grantees enrolling 10,173 participants, or 85 percent of OCSE’s target, with three grantees (Colorado, Tennessee, and Wisconsin) reaching 95 percent or more of their enrollment target. One-half of the noncustodial parents enrolled by each grantee were randomly assigned to receive CSPED services (the treatment group, also known as the extra services group); the other half were randomly assigned to a control group (also known as the regular services group) that did not receive the extra services.

⁵Grantees continued to enroll noncustodial parents into CSPED after study enrollment ended. Enrollment could continue until September 2018 when the CSPED grants ended.

Services were provided to the extra services group from October 2013 through September 2018 when the CSPED grants ended. Participants in the extra services group received most of their services in the first year after random assignment.

Service Receipt

The final impact and implementation reports (Cancian et al., 2019a; Noyes et al., 2018) describe how CSPED provided significantly more services across all dimensions examined—including case management, enhanced child support, employment, and parenting—than received by the regular services group. In the year after random assignment, those in the extra services group reported receiving, on average, 37 hours of child support, employment, or parenting services, compared with 15 hours for those in the regular services group, a difference of 22 hours. These additional hours of reported service receipt include 14 additional hours of employment services (including a mix of job readiness classes and one-on-one employment help), seven additional hours of parenting services, and one additional hour of child support services.

Our analysis of administrative data indicates that CSPED also increased the likelihood that noncustodial parents had their orders modified or had automatic wage withholding established during their first year in the program. In addition, consistent with the program design, CSPED reduced the likelihood that noncustodial parents experienced punitive enforcement actions—such as contempt hearings, warrants issued, or driver’s license suspensions—during their first year in the program. These differences persisted for license suspension into the second year of the program, but they did not persist into the second year for other punitive enforcement measures.

As described in the CSPED final implementation report (Noyes et al., 2018), OCSE gave grantees flexibility in designing their programs with respect to the noncustodial parents they served, how they implemented services, and the dosage of services that were offered. As a result, the package of services and amount of services that participants experienced ultimately differed across sites (Noyes et al., 2018).

Program Impacts

The CSPED impact analysis evaluated whether CSPED was effective at improving the outcomes it was designed to influence (Cancian et al., 2019a). CSPED had statistically significant impacts in five of the seven key domains measured by the impact analysis. CSPED reduced child support orders, which was consistent with its intent to right-size orders for low-earning parents. Payments declined by a smaller amount.⁶ In addition, CSPED participants reported more positive attitudes toward the child support program and a greater sense of financial responsibility for children. They also experienced modest improvements in earnings during the first year after random assignment. However, CSPED did not have a statistically significant impact on two key domains—compliance with current support orders or the amount or length of employment. These

⁶For child support payments, the impact report aims to measure payments toward current support (formal child support payments) and finds a small but statistically significant negative impact; the impact is not robust to all alternative specifications. In this report we consider the combination of formal support payments in the administrative records and informal cash and noncash contribution participants report making; for this outcome there is a positive but insignificant impact.

findings serve as a basis for the program benefit estimates that are provided in this benefit-cost report.

Roadmap for the Rest of the Report

We begin the presentation of our benefit-cost analysis with a discussion of the benefit-cost framework and the different perspectives examined in this report. A presentation of the different CSPED benefits and costs follows. Finally, we discuss the net benefits of CSPED from the perspective of government, custodial parents and children, noncustodial parents, and society.

Framework for the Benefit-Cost Analysis

The benefit-cost analysis framework itemized measurable costs and benefits of CSPED. The program costs were determined by estimating the costs of providing CSPED extra services to noncustodial parents relative to the costs of providing regular services. For example, if a program provided incentives for participants to participate in extra services, it was easy to express the average incentive given to a CSPED participant (e.g., the value of gift cards given to reward participants for completing a course) as a dollar value. This type of cost differential was calculated for a comprehensive set of CSPED costs. Our cost estimates include only the direct costs of implementing CSPED. We do not include in this section indirect costs that may result from changes in child support activities or noncustodial parent behavior. These changes, such as reduced child support enforcement activity, are considered program benefits.

Program benefit estimates were based on impact estimates for key outcomes, which directly measured the benefit of the extra CSPED services relative to the regular services condition. For example, a positive earnings impact was easily expressed as an average benefit per participant averaged across the grantees. The benefit-cost analysis included the benefit even if it was based on an impact estimate not statistically different from zero, because even if that estimate was imprecise, it was our best estimate of impact size.

In order to calculate the benefits and costs, all relevant information had to be valued in monetary terms. Some inputs into this analysis were already expressed in monetary terms, such as the cost of monetary program incentives or benefits of increased earnings. In some cases, benefits or costs were not measured directly in monetary terms and we needed to convert them. For example, in estimating the cost of staff time, we multiplied the number of hours that staff spent working with CSPED participants by an estimate of their hourly wage rate, and compared this to the average hours spent working with regular services participants times an estimated staff wage rate. We also needed to translate some benefits into monetary terms using information collected from publications about the costs of particular events, such as the impacts on criminal activity.

The final step of the benefit-cost analysis was to sum the benefits and costs, yielding the net-benefit estimates. As discussed in the next section, this is done for the following four perspectives, which are discussed further below: government, custodial parent and children, noncustodial parent, and society as a whole.

Different Perspectives

CSPED affected multiple stakeholders, and the benefit-cost analysis enabled us to distinguish how costs and benefits were distributed across these stakeholders. Any increase in participant earnings, for example, benefited participants, but government also benefited through increases in taxes collected on these earnings. An increase in child support payments represented a monetary cost to noncustodial parents, but represented a monetary benefit to custodial parents and children (if they received what was paid) or to the government (if the money was retained). An increase in employment and parenting services received by participants represented a benefit to noncustodial parents, but a cost to the government. Because the distinction between benefits and costs was dependent on whose perspective we considered, we examined the benefits and costs from four perspectives, those of (1) the government, (2) custodial parents and children, (3) noncustodial parents, and (4) society as a whole (sum of 1–3).

Different stakeholders are likely to focus on different benefit-cost perspectives based on their priorities and goals. For example, observers who are concerned about child well-being may think that net benefits for the custodial parent and child are the most important, whereas those focused on government spending may focus on whether there was a positive net benefit for the government. Advocates for nonresident fathers may be particularly concerned about the noncustodial parent perspective. Many policy scholars argue that the perspective of society as a whole is the most relevant, because it indicates whether the program generated overall gains by producing resources in the economy, rather than merely moving around existing resources.

The net benefits to society are simply the sum of all the measured benefits and costs, irrespective of who reaps the benefits or pays the costs. In general, from a societal perspective, programs that transfer money only among individuals or entities end up as essentially neutral exchanges, because they are costs for one but benefits for others. For example, because taxes are a cost to customers but an equal benefit to government, they are neither a benefit nor a cost from society's perspective. Similarly, because an increased amount of child support payments are a benefit to custodial parents and children and the government, but an equal cost to noncustodial parents, from society's perspective this transfer of income is neither a benefit nor a cost.

Interpreting the Framework Table

The benefits-cost framework for the four perspectives considered is summarized in Table 1. In this overview section, we discuss how to interpret the framework and provide a brief explanation of the framework components. Later sections provide detail on how the framework components are measured and, where relevant, converted to monetary values.

Each row of the framework corresponds to a type of cost or benefit that might result from operating CSPED. Changes that would have a favorable impact from a given perspective are denoted with a +; changes that would have a negative impact from a given perspective are denoted with a -; changes that have a neutral impact are denoted with a 0; and changes that have ambiguous impacts are denoted with a +/- . For example, increased noncustodial parent earnings is a positive impact from the perspective of noncustodial parents (+), neither a positive nor a negative impact for government and custodial parents (0), and thus a positive impact for society (+). However, the increased taxes that result from increased earnings are a negative impact from

the perspective of noncustodial parents (-), an equally sized positive impact from the perspective of government (+), and neither a positive nor a negative impact from the perspective of custodial parents (0), resulting in a neutral impact for society (0). In contrast, the recovery value of compromised arrears is a loss for the government (-), but because only a fraction of arrears is lost to the government, but the full amount is gained by noncustodial parents (+), the recovery value of arrears results in a positive gain for society (+). The impact of CSPED on custodial parent earnings, fringe benefits, and taxes are ambiguous because if CSPED increases child support payments and noncustodial parent responsibility, custodial parents could respond by increasing or decreasing their earnings, which, in turn, could increase or decrease their fringe benefits and taxes. If child support payments are increased, custodial parents could use that money to pay for work-related expenses, such as childcare and transportation, making it possible to increase their work effort. In addition, increased noncustodial parent responsibility could make it possible for the custodial parent to increase their work effort. On the other hand, increased child support payments could encourage custodial parents to work less since they now have additional child support income. The impact estimates will determine whether the sign for these benefits is positive or negative. Table 2 provides an explanation for the characterization of each type of cost or benefit in Table 1.

Table 1. Framework for measured benefits and costs of participating in CSPED, by perspective

	Government	CPs and children	NCP participants	Society
Potential benefits				
Increased formal child support and informal support	+	+	-	0
Reduced child support enforcement activities	+	0	+	+
Benefits from increased employment				
NCP earnings	0	0	+	+
NCP fringe benefits	0	0	+	+
NCP taxes	+	0	-	0
CP earnings	0	+/-	0	+/-
CP fringe benefits	0	+/-	0	+/-
CP taxes	+/-	+/-	0	0
Reduced NCP public benefit receipt				
TANF	+	0	-	0
SNAP	+	0	-	0
UI	+	0	-	0
Reduced CP public benefit receipt				
TANF	+	-	0	0
SNAP	+	-	0	0
UI	+	-	0	0
Reduced administrative costs pertaining to transfer programs	+	0	0	+
Reduced criminal justice involvement	+	0	+	+
Costs				
Costs of program services				
Staff time for case management, training, and other services	-	0	0	-
Recovery value of compromised state-owed arrears	-	0	+	+
License reinstatement	-	0	+	0
Participant incentives	-	0	+	0
Work supports	-	0	+	0

Notes: “+” suggests a positive value; “-” suggests a negative value; “0” suggests a value of zero; “+/-” suggests that the value could be positive or negative. SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families; UI = Unemployment Insurance.

Table 2. Justification for framework for measured benefits and costs of participating in CSPED, by perspective

Type of cost or benefit	Effect on each perspective
Potential benefits	
Increased formal child support and informal support	CSPED is expected to increase child support payments, which would be a benefit to custodial parents and (to the extent they are retained) to government, a cost to noncustodial parents, and neither a benefit nor a cost from society’s perspective.
Reduced child support enforcement activities	CSPED is expected to engage noncustodial parents in the child support program and thus decrease enforcement actions, which would be a benefit to taxpayer/government.
Benefits from increased employment	
NCP earnings	CSPED is expected to increased NCP earnings, which would be a benefit to NCPs and to society.
NCP fringe benefits	Since NCP earnings are expected to increase, this may increase fringe benefits, which would be a benefit to NCPs and to society.
NCP taxes	Increased NCP earnings should result in increased tax payments, which would be a benefit to government/taxpayers and an equal cost to NCPs; they are neither a benefit nor a cost from society’s perspective.
CP earnings	CSPED may increase or decrease CP earnings, depending upon how CPs respond to increased child support payments and increased noncustodial parent responsibility. If earnings increase, that would be a benefit to CPs and to society; if they decrease, that would be cost to CPs and society.
CP fringe benefits	CSPED may increase or decrease fringe benefits, depending upon whether CPs increase or decrease earnings. If CP fringe benefits increase, that would be a benefit to CPs and to society; if they decrease, that would be a cost to CPs and to society.
CP taxes	CSPED may increase or decrease tax payments, depending upon whether CPs increase or decrease earnings. If CP taxes increase, that would be a benefit to government/taxpayers and an equal cost to CPs; if CP taxes decrease, that would be a cost to government/taxpayers and an equal benefit to CPs. Changes in CP taxes are neither a benefit nor a cost from society’s perspective.
Reduced NCP public benefit receipt	
TANF	CSPED may reduce NCP transfer benefits, which would be a benefit to the government and an equal cost to NCPs; they are neither a benefit nor a cost from society’s perspective.
SNAP	
UI	
Reduced CP public benefit receipt	
TANF	CSPED may reduce CP transfer benefits, which would be a benefit to the government and an equal cost to CPs; they are neither a benefit nor a cost from society’s perspective.
SNAP	
UI	
Reduced administrative costs pertaining to transfer programs	To the extent that transfer benefits are reduced, this may lead to a decrease in administrative costs associated with delivering these services, which would be a benefit to government/taxpayers and to society.
Reduced criminal justice involvement	CSPED may reduce NCP criminal justice involvement, which would be a benefit to noncustodial parents, to government/taxpayers, criminal victims, and to society.

(table continues)

Table 2. Justification for framework for measured benefits and costs of participating in CSPED, by perspective, continued

Type of cost or benefit	Effect on each perspective
Costs	
Staff time for case management, training, and other services	These are costs to government and society.
Recovery value of compromised state-owed arrears	These are costs to government and a monetary benefit to noncustodial parents; they are a benefit from society's perspective because noncustodial parents' benefits exceed the government's costs.
License reinstatement	These are costs to government and an equal monetary benefit to noncustodial parents; they are neither a benefit nor a cost from society's perspective.
Participant incentives	These are costs to government and an equal benefit to noncustodial parents; they are neither a benefit nor a cost from society's perspective.
Work supports	These are costs to government and an equal monetary benefit to noncustodial parents; they are neither a benefit nor a cost from society's perspective.

SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families; UI = Unemployment Insurance.

Limitations of this Framework

A common concern with this benefit-cost framework is that it excludes some outcomes targeted by the programs because they are difficult to value in monetary terms. We excluded some outcomes in the benefit-cost analysis because of the complexity of valuing something for which an economic market does not exist (Károly, 2008). This approach is commonly taken in benefit-cost studies.

Outcomes not included in the benefit-cost analysis consist of two types—outcomes that were not measured by the evaluation and outcomes that were measured by the evaluation but were excluded from the benefit-cost analysis because they could not be assigned a dollar value. For example, the ultimate goal of CSPED was to increase the well-being of children, but this goal was not measured by the evaluation and therefore could not be included in the benefit-cost analysis. If the program had positive impacts on child well-being, for example, by reducing child maltreatment or increasing children’s educational outcomes, then these costs could have been included in the benefit-cost analysis.

In addition, we excluded several CSPED outcomes in the benefit-cost analysis that were included in the impact evaluation. For example, a key goal of CSPED was to increase reliable child support. For this reason, child support compliance, a measure of reliability, was a confirmatory measure in the impact analysis. However, we excluded it from the benefit-cost analysis because it is hard to value the regularity of income separately from the amount of income. Two other confirmatory outcomes—satisfaction with child support services and the sense of responsibility for children—are also excluded from the benefit-cost analysis.

Likewise, this framework assumes that the transfer of child support from the noncustodial parent to the custodial family has no economic benefit to society, because the cost of paying child support by the noncustodial parent is equal to the benefit of receiving child support by the custodial family (minus the amount retained by the government). This assumption does not allow for placing an economic value on the societal norm of parental responsibility. Nor does it allow for placing an economic value on any positive feelings the noncustodial parent derives from paying child support nor any value the child derives from knowing their parent is providing for them.

The benefit-cost analysis also did not include a valuation of the measured impact on improved noncustodial parenting and involvement with children. To date, it is not possible to provide a credible estimate of the monetary value of better parent-child relationships or more father involvement. The discussion provides guidance on how to take these excluded impacts under consideration when interpreting the net benefits of the program.

Other examples of intangible, hard-to-value benefits that were excluded from the benefit-cost analysis include: (1) reduction in housing instability; (2) increases in driver’s licenses; (3) personal fulfillment associated with training, employment, and job satisfaction; and (4) various psychological benefits of possible reduced criminal activity, such as reduced burden on witnesses and victims’ family members and fear of crime.

Even when we had to forego estimating a benefit or cost in monetary terms, however, having the information about certain costs and benefits can be valuable because it enables a discussion

among stakeholders about how large the unmeasured cost or benefit might be relative to the given existing estimates of benefit-cost. For example, if measured cost and benefits suggest that costs exceed benefits by a very small amount and there is a positive impact on a hard-to-value outcome that is not included in the benefit-cost analysis, then policymakers might conclude that the program is cost-effective. Thus, even if some aspects of the program costs and benefits cannot be fully estimated, the exercise is valuable in providing information about the magnitude of costs relative to benefits and can inform important discussion about program effectiveness.

Measuring Costs and Benefits of CSPED

In this section, we describe the measures used to estimate the costs and benefits of CSPED, including data sources and, where relevant, strategies implemented for expressing outcomes in monetary terms.

Measuring costs of CSPED

The goal of the cost calculation was to measure steady-state costs of operating CSPED and compare that to the steady-state costs of regular child support services. These measured costs of CSPED included staff time providing program services, administrative costs, and transfers to participants, including incentives.⁷ Table 3 provides information about the program costs included in the benefit-cost analysis, along with sources, assumptions, and notes about estimation.

A key challenge in this work was estimating the costs of both the CSPED services in a steady-state and the costs of regular child support services. In principle, we want to estimate costs for the child support and all other government and social services for both the CSPED participants and the regular services group participants. This means that we need to use information about both groups' program operations, CSPED and regular services.

⁷This analysis does not include valuation of some specialized vocational or skills training that CSPED provided. In addition, any services received outside of CSPED by any participant and training, employment and parenting services received by the regular services group are not included in this analysis. Ideally, all of these costs would be included so that the cost difference represents the additional costs of all services for CSPED extra services compared with regular services.

Table 3. Measuring costs of providing CSPED and regular services

	Notes and data sources
Costs of CSPED program services	
Staff time costs	Amount of time derived from staff survey data on total CSPED activities conducted. This includes both compensated and uncompensated time for enhanced child support services, parenting services, employment services, and other activities. Hourly cost of time derived from salary and fringe benefit information documented in second round site visits.
Recovery value of compromised state-owed arrears	Net present value of compromised arrears, assuming a 27 percent recovery rate for government. Compromised arrears are valued at present face value for NCPs. Value of arrears collected from study GMIS.
License reinstatement	Fees or other costs provided to have participant licenses reinstated. Information collected from study GMIS.
Participant incentives	Cash, clothing, food, transportation, and other incentives provided to accompany program milestones. Value of incentives collected from study GMIS.
Work supports	Cash, clothing, food, transportation, and other work supports. Value of work supports collected from study GMIS.
Costs of regular services	
Child support staff time costs	Amount of child support staff time derived from monthly per-worker caseload information and estimates of time spent by child support staff working with CSPED-like cases. Hourly cost of time derived from child support salary and fringe benefit information. Information was documented in second-round site visits.

Notes: GMIS = Grantee Management Information System. Staff survey conducted about six months prior to the end of study random assignment. Second-round site visits conducted just before the end of study random assignment.

CSPED program costs. The largest single category of CSPED costs was staff time, which was estimated based on information provided by grantees through the staff survey and second-round site visits. These data collection efforts were timed so that they examined staff time allocation across program activities during steady-state operation. The staff survey collected information on the amount of compensated and uncompensated time spent on CSPED activities such as enhanced child support services, parenting services, employment services, and other activities.⁸

⁸The staff survey also collected information on time spent on activities related to the CSPED evaluation rather than on CSPED program services. This time was excluded from the cost analysis.

We placed monetary value on this time based on salary and fringe benefit data documented in the second-round site visits. Separately, we collected information on time spent by managers and supervisors on CSPED service delivery management and administration as well as their salary and benefit information.⁹

Other CSPED costs included in the analysis were related to compromised state-owed arrears, license reinstatement, participant incentives, and work supports. All of these costs were derived from data collected through the study GMIS. Compromised state-owed arrears were adjusted to account for the fact that the state would not have been able to recover the full value of the arrears in the absence of the program. Specifically, we assumed that 27 percent of compromised state-owed arrears would have been recovered in the absence of the program based on analysis presented by Sorensen, Sousa, and Schaner (2007).

Excluded from the calculation of CSPED program costs were overhead costs related to rent and utility payments for office space because it was difficult to make comparable estimates from all of the CSPED sites in a way that really captured the marginal costs of providing extra services compared with regular services.

Business-as-usual costs. The benefit-cost calculation focused on the difference in total costs for providing CSPED services relative to business-as-usual child support services. In the same way that benefits of the program were taken from impact estimates of the difference between extra services and regular services groups on an outcome, we likewise estimated costs as a difference between the cost of providing CSPED and the cost of providing business-as-usual child support services. To do this we estimated costs of providing child support services under business-as-usual conditions, using information drawn from the second-round site visits and child support administrative records. Specifically, we asked site managers to provide information about (1) the total number of child support cases per worker¹⁰; (2) the percentage of child support cases that were “CSPED-like” (most similar to the CSPED target population); (3) the percentage of staff-time allocated to “CSPED-like” cases; and (4) the value of salary and benefits for a typical child support enforcement worker. We multiplied the first two terms to get the number of “CSPED-like” cases served per worker. We multiplied the latter two terms to get the cost of staff time spent on “CSPED-like” cases. The ratio of these values represents the cost per case:

$$\begin{aligned}
 \text{Cost per case} &= \frac{\text{Cost of "CSPED – like" cases}}{\text{Number of "CSPED – like" cases}} \\
 &= \frac{\text{Caseworker salary and benefits} * \text{Percent of time on "CSPED-like" cases}}{\text{Cases per worker} * \text{Percent of "CSPED – like" cases}}
 \end{aligned}$$

⁹As with regular staff, we collected and excluded managers’ time spent managing the CSPED grant and evaluation tasks.

¹⁰Most grantees reported caseloads as the number of cases served per month. The calculation for annual cost per case uses this reported value and thus assumes that there is no turnover in the caseworkers’ caseload throughout the year. To the extent that there is turnover in the caseload from month to month, the calculation represents an underestimate of the number of cases, and thus an overestimate of the cost per case.

A key limitation of this analysis is that the cost of providing extra services includes all of the costs associated with providing CSPED services, including child support, parenting, and employment services, but the business-as-usual costs only include the cost of providing child support services. Furthermore, the analysis does not account for services that the extra services group received from programs other than CSPED. The 12-month follow up survey asked members of both research groups about their receipt of employment, parenting, and other services. Regular services group members reported receiving an average of 13.4 hours of employment services and 1.5 hours of parenting services during the first year. The extra services reported receiving an average of 27.1 hours of employment services and 8.8 hours of parenting services during the first year. Taken together, across all of types of services, participants in the regular service group reported receiving about 40.5 percent as many hours of service as reported by the participants in the extra services group.

Measuring benefits of CSPED

We estimated potential benefits of CSPED in the following areas: increased child support payments, reduced child support enforcement activities, increased employment for noncustodial and custodial parents, reduced noncustodial parent and custodial parent dependence on public welfare transfers, and reduced criminal justice involvement among noncustodial parents. In each case, our estimates compared CSPED participant outcomes with those of participants in the regular services group.

Most benefits were measured using impacts from our analysis of administrative records, although some were based on survey data (See Table A.1 and A.2 for these results). In cases for which multiple data sources provided information on program benefits, we selected one data source as the benchmark and used other data sources to calculate alternative estimates as a robustness check on the benchmark (see Appendix B for results from these robustness checks). Specifically, benchmark estimates use administrative records, rather than survey reports, for earnings, public assistance receipt, and criminal justice involvement.

Some impacts were converted to dollar values using information available from other published sources or administrative information. These benefits include impacts on fringe benefit receipt, Medicaid participation, arrests, convictions, and incarceration. Because published sources often provide a range of estimates, we tested the robustness of these benefit estimates using alternative valuations. Benchmark estimates use the average of available values and sensitivity tests use the highest available value. See Appendix B for results of all sensitivity tests.

Table 4 provides information about the program benefits included in the benefit-cost analysis, along with the data source, notes about construction, and, where relevant, steps taken to convert measures into monetary terms.

Table 4. Measuring benefits of participating in CSPED relative to business as usual

Benefit type and data source	Notes
Increased formal child support and informal support	
Total payments during the first year after random assignment (administrative data) plus informal child support provided (survey)	The 12-month follow-up survey asked NCPs how much informal child support was paid and the value of noncash contributions to nonresident children were made in the last 30 days. These amounts were multiplied by 12 to estimate annual informal contributions. These reports are available only for the first year after random assignment. In measuring benefits during the second year after random assignment, we assume that informal child support and noncash contributions remained constant for NCPs in the second year.
Total payments during the second year after random assignment (administrative data) plus informal child support provided (survey)	Survey reports of informal child support are not available for all NCPs in our steady state sample of 1,744. The methods section explains how we impute this missing information. We allocate benefits to custodial parents and children and government accounting for administrative data on TANF receipt and state child support policies regarding child support pass-through and TANF disregards using information from the National Conference of State Legislatures (2018). We use survey-based total child support payments in a sensitivity test.
Reduced child support enforcement activities	
Whether a contempt hearing was held during the first or second years, (administrative data from all grantees except SC) multiplied by the estimated cost of contempt hearings	Reduced child support time spent on enforcement is reflected in program cost estimates, which are based on staff time use reports as described in Table 3. Reduced child support enforcement activities are measured for the states that have these data.
Whether a child support warrant was issued during the first or second years, (administrative data from CA, TX, WI) multiplied by the estimated cost of issuing warrant	Costs specific to child support on contempt hearings were unavailable. Valuation was based on the cost of a general court hearing, drawn from various data sources (Andoh et al., 2013; Jacoby, McEwen, and Guynes, 2001; Redcross et al., 2012). Values ranged from \$884 to \$7,750.
Whether a child-support-related license suspension occurred during the first or second years, (administrative data from CO, TX, WI) multiplied by the estimated cost of suspending licenses	Costs specific to child support on issuing a warrant were unavailable. Valuation was based on the cost of an arrest, drawn from various data sources (Andoh et al., 2013; Jacoby et al., 2001; Redcross et al., 2012). Values ranged from \$359 to \$1,200. Valuation for license suspensions was unavailable. Valuation is based on publicly available state fees for license reinstatement. These likely represent an upper bound for administrative cost since some states might intend the fees to be punitive. Additionally, administrative costs for suspensions might be higher because they require more steps (such as notification letters). Values ranged from \$55 to \$200.
Benefits from increased employment	
NCP earnings Total earnings during the first year after random assignment (administrative data)	Earnings are from the NDNH and are reported quarterly by employers. They do not include any earnings from informal or “off the books” work.
Total earnings during the second year after random assignment (administrative data)	Survey-based earnings outcomes are used in a sensitivity test.

(table continues)

Table 4. Measuring benefits of participating in CSPED, continued

Benefit type and data source	Notes
<p>NCP fringe benefits</p> <p>Percentage of months employed in job offering health insurance and paid leave (survey); converted to dollar value</p> <p>Employer costs for legally required benefits associated with earnings (survey)</p>	<p>We used NCP reports on the survey about whether they worked in a job for which the employer offered health benefits and paid leave to calculate the percentage of months NCPs worked in jobs that offered these benefits. The survey provides information on jobs held during the first year after random assignment. We assume that the percentages found for the first year after random assignment also apply to the second year after random assignment. To determine the monetary value of these fringe benefits, we used estimates for the cost of fringe benefits as a percentage of earnings based on nationally representative surveys from the Bureau of Labor Statistics (2018). These percentages are based on total employee costs reported by employers of civilian workers and employee receipt of those benefits in nationally representative surveys. In March 2018, paid leave represented 10.4 percent of earnings; health insurance represented 12.2 percent of earnings. Thus, we multiplied earnings by 10.4 percent in months in which the NCP was employed in jobs offering paid leave and by 12.2 percent in months in which the NCP was employed in jobs offering health insurance.</p> <p>Survey reports on health benefits and paid leave are not available for all NCPs that have earnings. We impute the percent of months working in a job with these benefits for those NCPs who are missing this information. The methods section explains how we impute this missing information.</p> <p>All employers are legally required to provide certain benefits including Social Security, Medicare, Unemployment Insurance, and Workers' Compensation. The Bureau of Labor Statistics (2018) estimates legally required benefits to represent 10.7 percent of earnings. Thus we multiplied all earnings by this percentage.</p>
<p>NCP taxes</p> <p>Total taxes during the first year after random assignment (estimated)</p> <p>Total taxes during the second year after random assignment (estimated)</p>	<p>We derive total taxes by multiplying income estimated based on earnings by the effective federal income and payroll tax rates reported by the Joint Committee on Taxation (2016) assuming a single filing status and a standard deduction. These values do not account for the Earned Income Tax Credit or other refundable credits. Thus they likely overstate levels of taxes. The effect of the simplifying assumptions on the impact on tax receipts is ambiguous depending on the extent to which CSPED affected eligibility for tax credits and propensity to claim them.</p>
<p>CP earnings</p> <p>Total earnings during the first year after random assignment (administrative data)</p> <p>Total earnings during the second year after random assignment (administrative data)</p>	<p>CP earnings include earnings from the NDNH for all CPs associated with the sample NCP.</p>
<p>CP fringe benefits</p> <p>Fringe benefits amounts were imputed based on published data sources</p>	<p>We did not have data on fringe benefit receipt for CPs. We assume that receipt of fringe benefits occurs at the same rate for CPs as for NCP with whom the CP is associated. We then valued these benefits using estimates for the cost of fringe benefits as a percentage of earnings based on nationally representative surveys from the Bureau of Labor Statistics (2018).</p>
<p>CP taxes</p> <p>Total taxes during the first year after random assignment (estimated)</p> <p>Total taxes during the second year after random assignment (estimated)</p>	<p>We derive total taxes by multiplying income estimated based on earnings by the effective federal income and payroll tax rates reported by the Joint Committee on Taxation (2016).</p>

(table continues)

Table 4. Measuring benefits of participating in CSPED, continued

Benefit type and data source	Notes
Reduced NCP public benefit receipt	
Total NCP SNAP benefits during two years after random assignment (administrative data for all grantees except CA)	Benefit estimates differ slightly from those reported in the impact report because some missing values were imputed (see methods section for further information).
Total NCP TANF benefits during two years after random assignment (administrative data for all grantees; CA is limited to Stanislaus County)	Approximate government Medicaid participation costs are based on national average Medicaid spending per full or partial benefit enrollee estimates (Kaiser Family Foundation, 2018).
Total NCP UI benefits received during two years after random assignment (administrative NDNH data)	
Approximate government cost for NCP participation in Medicaid during two years after random assignment (administrative data for CO, IA, TX, WI)	
Reduced CP public benefit receipt	
Total SNAP benefits during two years after random assignment, over all CPs associated with an NCP (administrative data for all grantees except CA)	Benefit estimates differ slightly from those reported in the impact report because some missing values were imputed (see methods section for further information).
Total TANF benefits during two years after random assignment, over all CPs associated with an NCP (administrative data for all grantees; CA is limited to Stanislaus County)	
Total UI benefits received by all CPs during two years after random assignment (administrative NDNH data)	
Approximate government cost for CP participation in Medicaid during two years after random assignment, over all CPs associated with an NCP (administrative data for CO, IA, TX, WI)	
Reduced administrative costs related to benefit receipt	
Total administrative costs of UI and public assistance receipt during the first and second years	We derive total administrative costs of benefit receipt by multiplying the amount of benefits received in each program by a percentage that reflects the estimated administrative costs of UI (9 percent), SNAP (7 percent), TANF (10 percent) and Medicaid (6 percent), which are from the U.S. House of Representatives Committee on Ways and Means (2004) and the Center on Budget and Policy Priorities (2018). We then sum these program-specific estimated administrative costs in the first and second years after random assignment.

(table continues)

Table 4. Measuring benefits of participating in CSPED, continued

Benefit type and data source	Notes
Reduced criminal justice involvement	
Number of arrests during two years after random assignment (administrative data from CA, OH, SC, TX, WI) multiplied by the processing costs related to an arrest	If criminal justice involvement was missing, it was imputed. See methods section for how we imputed data.
Number of convictions during two years after random assignment (administrative data from CA, CO, IA, TX, WI) multiplied by processing costs related to a conviction	Processing costs for arrests include booking and arrest, prosecution, and defense. Cost data were based on information available from various criminal justice studies (Andoh et al., 2013; Jacoby et al., 2001; Redcross et al., 2012). Values ranged from \$359 to \$1,200 per arrest.
Amount of time incarcerated (administrative data from IA, OH, SC, TN, TX, WI) multiplied by sanction costs related to incarceration in state facilities plus amount of time on probation and parole (administrative data from CA, CO, IA, WI) multiplied by sanction costs related to parole/probation during two years after random assignment	Government court costs for securing a conviction were based on information available from various criminal justice studies (Andoh et al., 2013; Jacoby et al., 2001; Redcross et al., 2012). Values ranged from \$884 to \$7,750.
Victimization costs associated with convictions (based on administrative records of number of convictions)	Sanction costs include government costs for probation, parole, and prison. Cost data were based on information available from various criminal justice studies (Andoh et al., 2013; Jacoby et al., 2001; Redcross et al., 2012; Schabbes, 2013). Government costs of incarceration ranged from \$46 per day to \$129 per day. Government costs of parole/probation ranged from \$2,555 to \$2,920.
	Victimization costs include personal injury, lost productivity, property loss, and administrative costs derived from processing insurance claims. Consistent data on type of crime committed were not available in the administrative data. Our analysis assumed that the distribution of convicted crime types aligned with national averages available from the FBI (U.S. Department of Justice, 2016). This assumption might have overstated victim costs for the CSPED sample if (as is likely) it has a higher percentage of crimes related to child support nonpayment than national averages. Valuation of victimization costs for these crimes was based on McCollister et al. (2010).
	Data on incarceration in local facilities was only available for one state. For that reason we do not include local incarceration in our benchmark estimates.
	When a range of value estimates was available, benchmark estimates used the average of available values and a sensitivity test used the highest value. We also conducted a sensitivity test using survey-based criminal justice outcomes.

Notes: Benefits are calculated based on differences in the regular and extra services group means for each type of benefits.

Analytic Methods Used to Estimate Benefits and Costs

In this section we discuss the analytic methods for discounting benefits, using samples of available data, calculating benefit estimates, and calculating net benefit estimates.

Discounting benefits

Costs are incurred at the time of program implementation, but some benefits can accrue over time. Because money today can be invested in alternative productive activities, benefits that accrue over time are discounted to reflect a present-day value that can then be directly compared to costs incurred at the time of program implementation. The value of the chosen discount rate should reflect beliefs of a return on an accessible, long-term investment. For our benefit-cost analysis, we chose 2.5 percent, which is consistent with the U.S. Treasury's daily real long-term interest rate and reflects beliefs on long-term investments. In analyses, the benefits and costs for the second year and subsequent years are discounted and presented as first year values. We also conducted a sensitivity test that assumed a 10 percent discount rate and the net benefits were similar to the benchmark estimates (see Appendix B).

Data sources and missing data

Data used in the benefit analysis came from a variety of sources, including data from each grantee on child support, public assistance program participation, and criminal justice involvement; National Directory of New Hires (NDNH); and the follow-up survey. Many outcomes were not available for the full sample of study participants, due to lack of administrative or survey data availability or survey nonresponse. In cases in which data were not available for the full sample, we used the impact on relevant outcomes for the sample on which it was defined as our best estimate of CSPED's impact. For example, if an administrative data source, such as incarceration data, was not available for a given state, we used the impact for all states that do have the data source for the purposes of the benefit-cost analysis. See the main impact report (Cancian et al., 2019a) for more details on construction and availability of different types of outcome data. When data were missing for an individual, we replaced the missing values with the mean for the existing sample by grantee and treatment group.

Calculating benefit estimates

As noted above, benefits were measured using impacts from our analysis of outcome data. As with the main impact findings, we use a regression model to estimate impacts controlling for a range of baseline characteristics (see Appendix C for more information about the impact estimation model). Also consistent with the main impact analysis, we weight the estimated impacts of the eight grantees equally to measure the average effect of CSPED across the eight grantees. All benefit measures were converted to monetary units before estimating the impact models. When a benefit type includes more than one subcomponent, we summed the subcomponents after converting to monetary units and before estimating the impact models.

Calculating net benefits of CSPED

As part of the benefit-cost analysis we calculated the net benefits of CSPED for each perspective we examined. The net-benefit measure provides a summary of all monetized program impacts we examined and was calculated by subtracting total costs from total benefits. We calculated net benefits separately for the four perspectives we examined: government, custodial parents and children, noncustodial parents, and society. CSPED's net benefit to society equals the sum of net benefits for noncustodial parents, custodial parents and children, and government.¹¹

The net-benefit estimates for each perspective sum across all factors included in the benefit-cost analysis. It is useful to consider whether these net-benefit estimates are statistically different from zero, as all estimates include uncertainty. We conducted these tests using the standard impact regression models described above. However, conducting this analysis was especially challenging because some outcomes were not available for some sample members. As noted above, our approach to handling the missing data was to replace missing values with the mean for the existing sample by grantee and treatment group, but this approach reduces the amount of variation that we would expect had these outcomes been measured for the full sample. As a result, the statistical analysis we conducted overstates the precision of some estimates. This means statistical significance may be overstated for these estimates. Put another way, some estimates may appear to differ from zero using the current approach, but if a more rigorous approach to missing data were used the same estimates might not differ from zero.

Findings

This section describes findings from the benefit-cost analysis. It begins with a discussion of findings from the cost analysis, followed by a discussion of program benefits. Next, we discuss net-benefit estimates and conclude with findings from sensitivity tests.

Estimates of Program Costs

Tables 5 and 6 show results from the cost analysis. These findings are summarized in the bullets below.

- The estimated steady-state annual cost to operate CSPED was \$4,617,096 across all eight grantees (Table 5). Our estimate incorporated the market value of all resources used to operate the program and deliver services. However, it excluded costs that would be required under business-as-usual operations, such as general administrative costs, rent, utilities, human services, and overhead, even if these costs might be marginally higher in the case of the CSPED program. This estimate reflects the costs of operating during a steady state and thus, we assume costs are the same over time.
- Labor expenses represented the largest share of program costs, at about \$4.17 million, or \$2,390 per participant. About 90 percent of the total estimated cost went toward salaries

¹¹Net benefits to society also include costs to victims of criminal activity, although we do not examine victims as a separate perspective.

and fringe benefits for CSPED staff members. Program services, including state-owed arrears comprise programs, license reinstatement, participant incentives, and work supports, comprised about 10 percent of the total estimated cost.

- We considered how these labor costs were distributed across different types of CSPED services. The implementation study uses information from the study GMIS to determine how hours of service receipt were allocated across case management, enhanced child support, employment, parenting, and other services (Noyes et al., 2018). If we assume that these allocations correspond to the allocations of labor time, these calculations suggest:
 - About 12 percent was allocated to case management services, which would correspond to approximately \$286 per participant
 - About 17 percent was allocated to enhanced child support services, which would correspond to approximately \$397 per participant
 - About 45 percent was allocated to employment services, which would correspond to approximately \$1,068 per participant
 - About 18 percent was allocated to parenting services, which would correspond to approximately \$430 per participant
 - About 9 percent was allocated to other services, which would correspond to approximately \$209 per participant
- The average cost of serving a CSPED participant for their first year in the program was \$2,647 (Table 6). This cost per participant was derived based on the average annual participants served during the random assignment period.
- We based our business-as-usual estimate of providing child support services to the regular services group on reports from CSPED administrators. They reported that about 19 percent of business-as-usual cases were similar to the CSPED population but these cases took up about 62 percent of caseworkers' time. Combining this information with caseload and salary data, the business-as-usual annual cost of providing child support services to business-as-usual cases was about \$142 per case.¹²
- Our business-as-usual cost estimate for the regular services group only includes the cost of providing child support services; it does not include the costs of any employment and parenting services they received in the community. We conducted a sensitivity test that included these other costs, by assuming that the programs received by the regular services group cost as much per hour as the services CSPED provided. Given these assumptions,

¹²This value is based on program reports on CSPED-like caseloads, percentage of time spent serving that caseload, and average annual salary. The cost per CSPED-like case ranges from \$25 to \$263 across programs.

the estimated business-as-usual costs were \$1,073 per participant when employment, parenting, and child support services were taken into account.

Table 5. Total estimated costs for all CSPED programs during a one-year period, in 2017 dollars

Type of cost	Value	Percentage of total cost
Direct program services		
Staff time for case management, training, and other services	\$4,168,741	90%
Recovery value of compromised state-owed arrears	132,439	3
License reinstatement	74,578	2
Participant incentives (cash, clothing, food, transportation, and other incentives)	130,191	3
Work supports (cash, clothing, food transportation, and other work supports)	111,147	2
Total program cost	\$4,617,096	100%

Notes: Recovery value of compromised state-owed arrears is based on the net present value of a 27 percent 10-year recovery rate; see Table A.1. The total compromised state-owed arrears amount was \$546,787. The total program cost estimate excludes administrative costs that would be incurred under business-as-usual operation, such as rent, utilities, and other general administration costs.

Table 6. Average cost per CSPED participant, in 2017 dollars

	Value
Annual program cost	\$4,617,096
Steady state annual participants	1,744
Average annual cost per participant	\$2,647
Average business-as-usual child support costs per participant	142
Average annual cost per participant relative to business-as-usual	2,505

Estimates of Program Benefits

Table 7 shows results from the benefits analysis, which accounted for the benefits or losses resulting from the impacts of CSPED on noncustodial parent and custodial parent outcomes. (See Appendix Tables A.1 and A.2 for estimated impacts of the monetized outcomes in the first and second years after random assignment for the treatment and control groups.) This analysis did not account for the cost of operating CSPED; it focused solely on the benefits of CSPED extra services relative to business as usual. These findings are summarized below.

Table 7. Benefits per participant of CSPED (in monetary terms) in the first year after random assignment, by perspective, in 2017 dollars

Type of benefit	Government	CPs and children	NCP participants	Society
Increased formal child support and informal support	\$8	\$96	-\$104	\$0
Reduced child support enforcement activities	\$351***	\$0	\$0	\$351***
Benefits from increased employment				
NCP earnings	\$0	\$0	\$359*	\$359*
NCP fringe benefits	0	0	137	137
NCP taxes	77	0	-77	0
CP earnings	0	-17	0	-17
CP fringe benefits	0	139	0	139
CP taxes	-16	16	0	0
Reduced NCP public benefit receipt				
TANF	\$9	\$0	-\$9	\$0
SNAP	-56*	0	56*	0
UI	-6	0	6	0
Medicaid	-18	0	18	0
Reduced CP public benefit receipt				
TANF	-\$14	\$14	\$0	\$0
SNAP	-92	92	0	0
UI	-2	2	0	0
Medicaid	-37	37	0	0
Reduced administrative costs pertaining to NCP transfer program benefits	-\$5	\$0	\$0	-\$5
Reduced administrative costs pertaining to CP transfer program benefits	-\$9	\$0	\$0	-\$9
Reduced criminal justice involvement				
Government costs	\$18	\$0	\$0	\$18
Victim costs ^a	0	0	0	-2
Total benefits in first year after random assignment				
Per participant	\$207	\$379	\$386	\$971
For all participants in CSPED steady-state cohort ^b	361,514	661,778	672,731	1,693,110

Notes: See Table 4 for sources of valuation for nonmonetary outcomes. Sums across outcomes from data sources with different sample sizes were constructed using imputation; statistical significance calculations do not account for variation associated with imputation. Because of rounding the sum of all benefits in a column does not equal the total first-year benefits.

^aCrime victimization costs are included in the societal perspective (the crime victim's perspective is not included in the table).

^bBased on 1,744 annual participants.

*/**/*** Difference relative to business-as-usual is statistically significant at the .10/.05/.01 level.

Societal perspective

The societal perspective sums the impacts discussed below across government, custodial parents and children, and noncustodial parents.¹³ Across all these perspectives and not accounting for program costs, CSPED benefited society by \$971 per participant relative to business-as-usual during the first year after random assignment (Table 7) and by \$692 during the second year after random assignment (Table 8). These values are not statistically significantly different from zero. For a steady-state sample of 1,744 annual CSPED participants¹⁴, these values imply total benefits across all participants of \$1.69 million in the first year after random assignment and \$1.21 million in the second year after random assignment, not accounting for program costs.

Custodial parent and children perspective

None of the estimated CSPED benefits for custodial parents and children were statistically significant in either the first or second years after random assignment (Tables 7 and 8). The largest increases in benefits during the first year occurred among fringe benefits (\$139), formal and informal child support (\$96), and SNAP benefits (\$92). Across all included outcomes, CSPED benefited custodial parents and children by \$379, on average, in the first year after random assignment, a difference that is not statistically significantly different from zero.

The largest increases in benefits during the second year after random assignment were related to CP earnings (\$247) and fringe benefits (\$212), although neither of these were statistically significant. On average, custodial parent and children's total benefit from CSPED was \$473 in the second year after random assignment (Table 8), which is not statistically significantly different from zero.

Noncustodial parent perspective

CSPED increased noncustodial parent's earnings relative to business-as-usual by \$359 per participant in the first year after random assignment, a difference that is statistically significant at the .10 level (Table 7). CSPED increased the value of their fringe benefits by \$137, a difference that is not statistically significant. CSPED also increased noncustodial parent SNAP benefit receipt by \$56, a difference that is statistically significant at the .10 level. Increases in noncustodial parent earnings, fringe benefits, and SNAP were partially offset by increased child support payments and increased tax payments. The total benefit of CSPED for noncustodial parents was \$386, on average, in the first year after random assignment, a value that is not statistically significant (Table 7).

¹³The societal perspective also includes costs of crime victimization associated with noncustodial parent criminal activity. We do not present the crime victimization costs from the perspective of the victims. See Table 4 for more information about these outcomes.

¹⁴This value accounts for the fact that enrollment for the South Carolina grantee took place over 28 months rather than three years.

Table 8. Benefits per participant of CSPED (in monetary terms) in the second year after random assignment, by perspective, in 2017 dollars

Type of benefit	Government	CPs and children	NCP participants	Society
Increased formal child support and informal support	\$9	\$23	-\$32	\$0
Reduced child support enforcement activities	\$86	\$0	\$0	\$86
Benefits from increased employment				
NCP earnings	\$0	\$0	-\$23	-\$23
NCP fringe benefits	0	0	75	75
NCP taxes	-15	0	15	0
CP earnings	0	247	0	247
CP fringe benefits	0	212	0	212
CP taxes	60	-60	0	0
Reduced NCP public benefit receipt				
TANF	-\$6	\$0	\$6	\$0
SNAP	-82**	0	82**	0
UI	-11	0	11	0
Medicaid	-26	0	26	0
Reduced CP public benefit receipt				
TANF	-\$15	\$15	\$0	\$0
SNAP	-24	24	0	0
UI	25	-25	0	0
Medicaid	-36	36	0	0
Reduced administrative costs pertaining to NCP transfer program benefits	-\$9**	\$0	\$0	-\$9**
Reduced administrative costs pertaining to CP transfer program benefits	-\$3	\$0	\$0	-\$3
Reduced criminal justice involvement				
Government costs	\$84	\$0	\$0	\$84
Victim costs ^a	0	0	0	23
Total benefits in second year after random assignment				
Per participant	\$37	\$473	\$160	\$692
For all participants in CSPED steady-state cohort ^b	63,958	824,427	279,465	1,207,341

Notes: Values discounted at 2.5 percent; impact estimates shown in the main impact report are not discounted and thus differ slightly from those shown here. See Table 4 for sources of valuation for nonmonetary outcomes. Sums across outcomes from data sources with different sample sizes were constructed using mean imputation; statistical significance calculations do not account for variation associated with imputation. Because of rounding the sum of all benefits in a column does not equal the total first-year benefits.

^aCrime victimization costs are included in the societal perspective (the crime victim's perspective is not included in the table).

^bBased on 1,744 annual participants.

/ Difference relative to business-as-usual is statistically significant at the .10/.05/.01 level.

During the second year after random assignment, CSPED increased noncustodial parent receipt of SNAP benefits by \$82 relative to business-as-usual, a difference that is statistically significant (Table 8). However, impacts on noncustodial parents' child support payments and earnings were small and negative in the second year after random assignment. Across all included outcomes, CSPED benefited noncustodial parents by \$160, on average, in the second year after random assignment, a value that is not statistically significantly different from zero (Table 8).

Government perspective

CSPED reduced the government's child support enforcement activity costs relative to business as usual by \$351 per participant in the first year after random assignment, a statistically significant difference (Table 7). These savings were driven by reductions in issuing child-support-related warrants and court hearings (Cancian et al., 2019a; Table A.2). However, the enforcement activity savings were partially offset by other changes. For example, increased noncustodial parent and custodial parent SNAP benefit receipt, and administrative costs associated with that receipt, all reduced the benefits of CSPED that accrued to the government. Across all factors included in the analysis, CSPED generated about \$207 in benefits per participant for the government (not accounting for program costs), a difference that is not statistically significantly different from zero.

CSPED-related reductions in the government's child support enforcement activity costs, estimated at about \$86 per participant, were smaller during the second year after random assignment than during the first (Table 8). As in the first year, this benefit to government was offset by other factors, such as the value of increased noncustodial parent SNAP benefits. Combining all sources of benefits, CSPED's impacts generated about \$37 per participant in benefits relative to business-as-usual, a difference that is not statistically significantly different from zero (Table 8).

Net-Benefit Estimates

Table 9 shows results from the net-benefits analysis, which combined the cost and benefit estimates described above.

We estimate that the cost of CSPED per participant relative to business-as-usual to the government was \$2,505 per participant (Tables 6 and 9). We estimated that the benefits of CSPED to society were \$971 per CSPED participant during the first year after random assignment (Tables 7 and 9). Subtracting cost per participant from benefits per participant, we estimate that, relative to regular child support services, CSPED produced net costs to society of \$1,220 per participant during the first year after random assignment. For a steady-state sample of 1,744 annual CSPED participants, these values imply total net costs across all participants of about \$2.13 million in the first year after random assignment. Based on the ratio of these net benefits to the relative costs of the program, we estimate that CSPED cost society 49 cents for every dollar spent on the program for a one-year follow-up period. That is to say that the benefits partially, but not fully, offset the costs of operating CSPED to society during the first year.

Table 9. Estimates of net benefits (in monetary terms) per CSPED participant in two years after random assignment by perspective, in 2017 dollars

Benefits or costs	Perspective			
	Government	CPs and children	NCP participants	Society
Per participant				
Costs of CSPED extra services relative to regular services	-\$2,505	\$0	\$314	-\$2,191
Through the end of first year after random assignment				
Total benefits	\$207	\$379	\$386	\$971
Net benefits	-2,298	379	700	-1,220
Net benefits per dollar of program expenditures	-0.92	0.15	.28	-0.49
Through the end of second year after random assignment				
Total benefits	\$244	\$852	\$546	\$1,663
Net benefits (sum of total benefits for the first and second years after random assignment)	-2,261	852	860	-528
Net benefits per dollar of program expenditures	-0.90	0.34	0.34	-.21
For all participants in CSPED steady-state cohort^a				
Costs of CSPED extra services relative to regular services	-\$4,368,720	\$0	\$546,779	-\$3,821,941
Through the end of the first year after random assignment				
Total benefits	\$361,514	\$661,778	\$672,731	1,693,110
Net benefits	-4,007,206	661,778	1,220,347	-2,127,994
Net benefits per dollar of program expenditures	-0.92	0.15	0.28	-0.49
Through the end of the second year after random assignment				
Total benefits	\$425,472	\$1,486,205	\$952,196	\$2,900,452
Net benefits (sum of total benefits for the first and second years after random assignment)	-3,943,248	1,486,205	1,499,812	-920,652
Net benefits per dollar of program expenditures	-0.90	0.34	0.34	-0.21

Notes: Net-benefit amount is estimated by adding impacts on the different total benefits and total costs. Based on regressions of net-benefit outcomes, net benefits through the end of the first year after random assignment from the perspective of government and NCPs are statistically significant and net benefits from the perspective of society are statistically significant at the .10 level. Statistical regression tests for cumulative net benefits through the end of the second year after random assignment are not informative for the estimates reported in this table because the first year and second year estimates are based on different samples, thus we do not report test of statistical significance for these estimates.

^aBased on 1,744 annual participants.

We also estimate that CSPED generated another \$692 of benefits per participant to society as a whole during the second year after random assignment (Table 8). Adding these benefits to the net benefits from the first year shows that the cumulative benefit of CSPED to society was \$1,663 during the two years after random assignment (Table 9). Accounting for program costs, the net cost to society was \$528 per participant or about \$920,652 for the steady-state sample of CSPED participants. These values imply that through two years of follow-up, CSPED cost society 21 cents for every dollar spent on the program.

CSPED generated benefits for custodial parents and children, as well as noncustodial parents. For every dollar spent on CSPED program services, custodial parents and children received 34 cents in benefits and noncustodial parents received 34 cents during the first two years after random assignment. However, these benefits were smaller than the cost of operating CSPED. CSPED produced net costs for the government of 90 cents per dollar spent on CSPED.

Results of sensitivity tests

We conducted sensitivity tests in which we generated benefit-cost estimates based on alternative assumptions or methods related to valuing employment and parenting services in the regular services group, discount rates, and the measurement of a few key benefits. These tests provide an indication of how much the findings might change if differing assumptions are used.

A potential limitation of the main benefit-cost estimates is that the cost estimates only include the cost of providing CSPED and business-as-usual child support services. They do not include the cost of employment and parenting services provided to extra services group members through programs other than CSPED, nor do they account for employment and parenting services provided to regular services group members in the community. The main benefit-cost estimates omit these costs because we do not have any cost data for programs other than CSPED that provided services to study participants. However, we do have some data from the follow-up survey about services received by both the regular and extra services groups. These data have important limitations—they do not provide information about the intensity or cost of services, do not distinguish between services provided by CSPED versus other programs, and reflect only the self-reported time spent in services by the participant (not the time that it takes program staff to deliver a service).

With these caveats in mind, we use the survey data to construct alternate estimates of the net benefits of CSPED that account for the cost of services available in the business-as-usual environment beyond child support services. To calculate these estimates, we have to make a number of assumptions. Specifically, we assume that all types of services cost the same per hour of service receipt, regardless of who provides them and what type of services they are. We also assume that all non-CSPED services cost as much as CSPED per hour of service received. This method does not account for services other than CSPED received by the extra services group and, as a result, likely somewhat understates the difference in costs received by the extra services and regular services groups. These estimates suggest CSPED would yield a benefit to society after two years of \$296 per participant. Thus, this approach suggests that taking into account specific information on the costs of a broader range of community-based employment, parenting, and other services would provide a more favorable cost-benefit estimate.

Extrapolating benefit estimates to future years

Our data provide a two-year follow-up period. It is of interest to consider what the net benefits of CSPED would be given a longer time horizon than our data provide. For example, any increased earnings for noncustodial parents might persist into future years. We considered this by simulating how the net benefits would change over time if the net benefits observed for the second year after random assignment were to decline at certain rates each year. During the observed study period, total benefits to society declined from \$971 per participant in the first year after random assignment to \$692 per participant in the second year after random assignment, a decline of 29 percent. If the total benefits to society were to continue to decline at the same 29 percent rate, the total benefits to society would be \$491 per participant in the third year after random assignment.¹⁵ Cumulatively over a 10-year period during which total benefits decline at 29 percent per year, the net present value of the benefit to society would be \$1,055 per participant, or \$1.84 million for the steady-state sample of 1,744 CSPED participants. Thus, under these assumptions society would gain about 42 cents for every dollar spent on CSPED.

Table 10 shows CSPED's net benefits over a 10-year time period under different assumptions about the rate at which the total benefits for the second year after random assignment decline over time. Because the total benefit to the government in the second year after random assignment was so small (\$37, Table 8), and the operating costs are faced by the government, we found that the government would experience a cumulative net cost from CSPED under any set of assumptions about the decline in total benefits for the second year after random assignment. However, there were cumulative benefits over a 10-year time period to noncustodial parents and even larger cumulative benefits to custodial parents and children. If total benefits declined at a rate of about 50 percent per year or less, society would benefit from CSPED. If total benefits declined at a rate greater than about 50 percent per year, society would experience costs from CSPED.

¹⁵For ease of exposition, this value is derived as $\$692 * (1 - 0.29)$ and does not account for the fact that this flow of benefits would occur in the future. Discounting at 2.5 percent, as is done in the Table 9 net present value calculations, the value is \$479 rather than \$491.

Table 10. Cumulative net benefits (in monetary terms) of CSPED over a 10-year period under varying assumptions about the decline over time of benefits measured for the second year after random assignment

	Perspective			
	Government	Custodial parents and children	Noncustodial parent participants	Society
Net benefits per participant when percentage decline in benefits per year is:				
20	-\$2,139	\$2,422	\$1,392	\$1,771
29	-2,177	1,933	1,226	1,055
30	-2,181	1,890	1,212	992
40	-2,207	1,549	1,096	493
50	-2,225	1,323	1,020	162
60	-2,237	1,167	967	-67
Net benefits for all participants in CSPED steady-state cohort ^a when percentage decline in benefits per year is:				
20	-\$3,730,855	\$4,223,985	\$2,427,868	\$3,088,720
29	-3,796,972	3,371,724	2,138,968	1,840,617
30	-3,802,794	3,296,683	2,113,530	1,730,722
40	-3,848,974	2,701,408	1,911,743	858,964
50	-3,879,552	2,307,257	1,778,133	281,745
60	-3,900,640	2,035,437	1,685,991	-116,324
Net benefits per dollar of program expenditures				
20	-\$0.85	\$0.97	\$0.56	\$0.71
29	-0.87	0.77	0.49	0.42
30	-0.87	0.75	0.48	0.40
40	-0.88	0.62	0.44	0.20
50	-0.89	0.53	0.41	0.06
60	-0.89	0.47	0.37	-0.03

Notes: Total benefits for the second year after random assignment shown in Table 8. Values reflect net present value in the first year after random assignment, discounting the total benefit stream at a rate of 2.5 percent per year. The observed decline in societal total benefits from the first year to the second year was 29 percent.

^aBased on 1,744 annual participants.

Discussion

The benefit-cost analysis found modest benefits of CSPED for custodial parents and children, as well as noncustodial parents (Table 9). These benefits did not outweigh the cost to the government for operating CSPED in the two-year follow-up period, relative to the cost of business-as-usual child support services without taking into account community-based employment and parenting services received by both research groups. It is difficult to value the costs of community-based employment, parenting, and other services, because this study did not collect data on the costs of these programs. If, however, we include estimates of a broader range of costs associated with providing services to the regular services group by making the assumption that these services all cost about the same amount as CSPED-provided services, then the cost-benefit calculations are more favorable. Furthermore, when we extrapolate the benefits of CSPED over a longer period than covered by the study's data, we find that under most assumptions the benefits of CSPED do outweigh its operation costs from the perspective of society, although not from the perspective of the government.

Providing CSPED services required an increase in staffing to provide key employment and parenting services, leading to higher costs for CSPED relative to providing regular child support services. Other program costs included the reduction in state-owed child support arrears, program incentives, and the cost of other services such as license reinstatement. The total cost for the government to provide CSPED services relative to the business-as-usual child support services was \$2,505. If we include a broader range of business-as-usual costs, by making assumptions about the cost of these services being similar to the costs of CSPED services, then the relative cost of providing CSPED was \$1,574. Either of these cost estimates are moderate relative to other employment programs. For example, the training programs studied in the national Individual Training Account experiment ranged in cost from about \$3,600 to about \$5,000 per participant (Perez-Johnson et al., 2010). A recent study of employment programs offered through the Work Investment Act found per-participant costs ranging from about \$3,000 to about \$4,000 (Fortson et al., 2018).

The CSPED evaluation measured many outcomes that we can readily value in monetary terms, including child support enforcement activities and criminal justice outcomes, as well as noncustodial parent and custodial parent earnings and public benefits. CSPED generated little or no statistically significant impact on these outcomes over the two years it operated. From the government's perspective, CSPED led to a significant reduction in costs related to child support enforcement activities. These cost reductions were partially offset by other increased costs, particularly those related to custodial parent and noncustodial parent public benefit receipt. Both custodial parents and children and noncustodial parents experienced modest benefits from CSPED, primarily related to small increases in both employment-related outcomes and public benefits, most of which were not statistically significant. Taking the perspectives of government, custodial parents and children, and noncustodial parents together, the estimates of overall program benefits to society that could be valued were \$971 per participant in the first year of the program and \$692 per participant in the second year, for a total of \$1,663 per participant.

Taking into account the benefits and costs of CSPED relative to providing regular child support services to the regular services group, we find that CSPED cost society \$842 per participant

during the first two years after random assignment. Extrapolating the net benefits from the second year over a 10-year period, if total benefits declined at a rate of 50 percent per year or less, total benefits to society generated from CSPED would outweigh the government costs by a small amount. If the business-as-usual cost estimate includes an estimate of the costs of parenting and employment services, based on the assumption that these services cost the same as services provided by CSPED, then calculations indicated CSPED benefited society \$403 per participant during the first two years after random assignment.

As noted earlier, CSPED had several impacts on key outcomes that the benefit-cost analysis was not able to value. This is often the case in programs that seek to affect attitudes or the quality of relationships, as these outcomes have no accepted market values on which to base an analysis. Among the primary outcomes CSPED aimed to affect, CSPED increased noncustodial parents' positive perceptions of the child support program and noncustodial parents' sense of responsibility for children. It also increased noncustodial parent contact with their children, and led to a modest reduction in housing instability. We could not place a dollar value on these positive impacts and, for this reason, did not include them in the benefit-cost analysis. In addition, there were other potential benefits from CSPED that were not measured by the impact analysis, most notably the potential benefits to noncustodial parents' children, such as improved educational outcomes and reduced maladaptive behaviors. Policymakers need to determine whether these unmeasured benefits, along with the observed, modest benefits to custodial parents and children and noncustodial parents, justify the cost of the program to the government.

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Appendix A. Supplemental Tables

Table A.1. Impacts of CSPED on monetized outcomes and other benefits in the first year after random assignment

Outcome	Extra services group	Regular services group	Estimated impact	<i>p</i> -value	Effect size
Increased child support and arrears payments	\$6,223	\$6,119	104	.200	0.024
Reduced child support enforcement activities	-\$4,086	-\$4,437	351***	.001	0.056
Benefits from increased employment					
NCP earnings	\$9,344	\$8,986	359*	.085	0.029
NCP fringe benefits	2,047	1,909	137***	.007	0.048
NCP taxes	2,214	2,137	77	.202	0.021
CP earnings	22,348	22,365	-17	.973	-0.001
CP fringe benefits	4,420	4,281	139	.180	0.025
CP taxes	6,608	6,624	-16	.913	-0.002
Reduced NCP public benefit receipt					
TANF	\$141	\$150	-9	.524	-0.011
SNAP	1,259	1,203	56*	.068	0.032
UI	202	195	6	.737	0.006
Medicaid	1,333	1,315	18	.374	0.015
Reduced CP public benefit receipt					
TANF	\$632	\$617	14	.487	0.008
SNAP	4,217	4,126	92	.209	0.021
UI	197	195	2	.901	0.002
Medicaid	2,337	2,300	37	.246	0.017
Reduced administrative costs pertaining to NCP transfer program benefits					
	\$205	\$201	5	.188	0.022
Reduced administrative costs pertaining to CP transfer program benefits					
	\$473	\$463	9	.133	0.023
Reduced criminal justice involvement					
Government costs	\$1,373	\$1,391	-18	.662	-0.008
Victim costs ^a	239	237	2	.871	0.003

Notes: See Table A.1 for sources of valuation for nonmonetary outcomes. Procedures for imputing missing data are described in the analytic methods section. The sample size for all impacts is 10,161.

^aCrime victimization costs are not shown separately from the victim's perspective but are included in the societal perspective.

*** Difference relative to regular services is statistically significant at the .10/.05/.01 level.

Table A.2. Impacts of CSPED monetized outcomes and other benefits in the second year after random assignment

Outcome	Extra services group	Regular services group	Estimated impact	<i>p</i> -value	Effect size
Increased child support and arrears payments	\$6,262	\$6,230	32	.693	0.007
Reduced child support enforcement activities	-1,132	-1,218	86	.212	0.026
Benefits from increased employment					
NCP earnings	\$10,860	\$10,883	-23	.939	-0.002
NCP fringe benefits	2,419	2,345	75	.327	0.022
NCP taxes	2,740	2,755	-15	.866	-0.003
CP earnings	23,028	22,780	247	.695	0.009
CP fringe benefits	4,554	4,342	212	.115	0.037
CP taxes	6,927	6,867	60	.751	0.007
Reduced NCP public benefit receipt					
TANF	\$117	\$110	6	.670	0.009
SNAP	1,100	1,019	82	.038	0.050
UI	122	111	11	.521	0.015
Medicaid	1,271	1,245	26	.281	0.022
Reduced CP public benefit receipt					
TANF	\$530	\$516	15	.584	0.009
SNAP	3,953	3,929	24	.788	0.006
UI	163	188	-25	.275	-0.024
Medicaid	2,207	2,171	36	.335	0.017
Reduced administrative costs pertaining to NCP transfer program benefits					
	\$180	\$171	9	.032	0.048
Reduced administrative costs pertaining to CP transfer program benefits					
	\$437	\$434	3	.739	0.007
Reduced criminal justice involvement					
Government costs	\$2,636	\$2,720	-84	.222	-0.026
Victim costs ^a	463	486	-23	.197	-0.027

Notes: See Table A.1 for sources of valuation for nonmonetary outcomes. Values discounted at 2.5 percent; impact estimates shown in the main impact report are not discounted and thus differ slightly from those shown here.

^aCrime victimization costs are not shown separately from the victim’s perspective but are included in the societal perspective.

*/**/*** Difference relative to business-as-usual is statistically significant at the .10/.05/.01 level.

Appendix B. Sensitivity Tests

We estimated alternate versions of the main benefit-cost analysis to assess sensitivity of findings to different assumptions, shown in Table B.1 and discussed below.

Valuation of criminal justice outcomes. There is a wide range in published estimates of the cost of criminal justice activities such as arrests and court costs. However, CSPED's impacts on these outcomes were very small. As a result, the benefit-cost estimates were not sensitive to different assumptions about costs of criminal justice activities. We tested benefit-cost models that used the highest valuations we found in the criminal justice literature and found net-benefit estimates similar to the benchmark estimates reported in Table 8.

Assumptions about arrears recovery. In valuing CSPED program's compromise of state-owed arrears, we had to make assumptions about how much of the arrears might have been collected had it not been compromised. Our primary analysis assumed that child support would collect 27 percent of those arrears over a 10-year period. However, cost estimates were not strongly sensitive to this assumption. Based on Table 5, if we placed no value on compromised state-owed arrears, an assumption corresponding to states collecting none of those arrears under business-as-usual, the total cost of CSPED would be \$4,484,657 rather than \$4,617,096. Accordingly, the per participant cost of CSPED relative to business-as-usual would be \$2,429, about 4 percent lower than the cost used in our main analysis (Table 8). This alternate assumption slightly increases government and society's net benefits (or slightly reduces their net costs). If we assumed a higher arrears collection rate, the cost of CSPED was higher and government and society's net benefits were correspondingly lower.

Survey-based measures of child support outcomes. Our benchmark estimates for noncustodial child support payments were based on administrative records for formal payments and survey data for informal payments (including the value of noncash contributions). We estimated alternate versions of the benefit-cost models using total child support payments from survey data. As in the main analysis, we allocate benefits to custodial parents and children and government accounting for administrative data on TANF receipt and state child support policies regarding child support pass-through and TANF disregards using information from the National Conference of State Legislatures (2017). The net benefits from the sensitivity test for each perspective were within 10 dollars of the benchmark estimates.

Survey-based measures of employment and criminal justice outcomes. Our benchmark estimates for noncustodial parent earnings and criminal justice outcomes were based on administrative records. We estimated alternate versions of the benefit-cost models using outcomes based on survey data. The benchmark benefit-cost estimates were not sensitive to which of these data sources was used in the analysis. The net benefit from the perspective of noncustodial parents was somewhat smaller using the survey-based measures (\$137 versus \$386), but this difference would not affect the broad characterization of the net-benefit estimates.

Cost of services for business-as-usual. Our methods of calculating the costs of services for CSPED-like cases only accounts for the cost of child support case work. Regular services group

participants were not eligible to receive CSPED services. However, they were eligible for other services available in the community. For example, they may have attended workshops related to finding a job or attending a parenting class that were not related to CSPED. Similarly, participants in the CSPED extra services group might have sought out employment or parenting services beyond those offered by CSPED. Ideally, the cost of all the services received by both research groups would be calculated and taken into account in estimating the difference in costs. Some information about service receipt is provided in the survey. However, these data do not distinguish between services provided by CSPED and those provided by other programs. In addition, they do not provide information about the cost of services, and reflect only the time spent in services by the participant (not the time that it takes program staff to deliver a service).

Nonetheless, we use this information to consider how costing out this broader perspective on service use might change the estimated costs of CSPED. Using numbers on the total hours of all service receipt reported, we find that CSPED extra services participants reported 37 hours and regular services participants reported 15 hours. Thus, regular services participants received about 40.5 percent of the service hours received by CSPED extra services participants (including services they received from CSPED and other programs). Using information on the total cost of services per participant, and calculating that regular services group had costs about 40.5 percent of that amount, suggests a relative cost of CSPED of \$1,574, substantially lower than the cost of \$2,647 used in the main analysis. Using this lower net-cost estimate would result in the net benefit outweighing the net costs after two years by an amount of \$296 per participant (\$1,663 to \$1,367). This value does not fully account for the cost of services provided to extra services participants by programs other than CSPED and, as a result, likely somewhat understates the difference in costs received by the extra services and regular services groups.¹⁶ However this approach does suggest that taking into account the costs of employment and parenting services among the regular services group might provide a more favorable cost-benefit estimate. However, it is important to note that this approach assumes the program cost per hour of survey-reported, client-facing service provision is the same for programs serving the regular services group as it is for CSPED-provided services. Other programs might have more or less expensive labor costs and other expenses.

Vary discount rate. Because our main estimates reflected only a two-year time period, they were not sensitive to the choice of discount rate. For example, if the discount rate was assumed to be 10 percent, rather than 2.5, the net benefits were similar to the benchmark estimates.

¹⁶Specifically, the calculation for the per participant cost of services received by the regular services group is $0.405 * \text{Cost of CSPED per participant}$. Ideally it would be $0.405 * (\text{Cost of CSPED per participant} + \text{Per participant cost of non-CSPED services received by the extra services group})$. Thus this estimate understates the relative cost of services received by the extra services group by $0.405 * \text{Per participant cost of non-CSPED services received by the extra services group}$.

Table B.1. Estimates of net benefits per CSPED participant in two years after random assignment, by perspective, in 2017 dollars

Net benefits	Perspective			
	Government	CPs and children	NCP participants	Society
Benchmark				
Through the first year after random assignment	-\$2,298	\$379	\$700	-\$1,220
Through the second year after random assignment	-2,261	852	860	-528
Highest valuation of criminal justice outcomes				
Through the first year after random assignment	-\$2,299	\$379	\$700	-\$1,221
Difference from benchmark	-1	0	0	-1
Through the second year after random assignment	-2,320	852	860	-587
Difference from benchmark	-59	0	0	-59
No value to the government for compromised state arrears				
Through the first year after random assignment	-\$2,222	\$379	\$700	-\$1,144
Difference from benchmark	76	0	0	76
Through the second year after random assignment	-2,185	852	860	-452
Difference from benchmark	76	0	0	76
Survey-based child support outcomes for the first year after random assignment				
Through the first year after random assignment	-\$2,297	\$386	\$708	-\$1,220
Difference from benchmark	1	7	8	0
Survey-based employment and criminal justice outcomes for the first year after random assignment				
Through the first year after random assignment	-\$2,272	\$385	\$451	-\$1,437
Difference from benchmark	26	6	-249	-217
Estimating the survey-based cost of Regular services group service receipt				
Through the first year after random assignment	-\$1,367	\$379	\$700	-\$289
Difference from benchmark	931	0	0	931
Discount rate is 10				
Through the first year after random assignment	-\$2,298	\$379	\$700	-\$1,220
Difference from benchmark	0	0	0	0
Through the second year after random assignment	-2,264	820	849	-575
Difference from benchmark	-3	-32	-11	-47

Note: Societal net benefits include costs to victims of crimes, which are not shown elsewhere in the table. For sensitivity tests involving replacement of administrative data sources with survey-based outcomes, we report only net benefits for the first year after random assignment because the survey does not cover the second year after random assignment.

Appendix C. Impact Estimation Model

Using regression models to estimate impacts improves the precision of the estimates and adjusts for small differences in the initial characteristics of the research groups that may have arisen by chance or through survey nonresponse. The ordinary least squares regression models are represented by the following equation:

$$Y_{it} = \sum_{g=1}^8 \gamma_g G_{gi} + \sum_{g=1}^8 \beta_g G_{gi} \times CSPED + \sum_{g=1}^8 \delta_p G_{gi} \times X_{i0} + \epsilon_{it}$$

where Y_{it} is an outcome variable for person i at time t ; G_{gi} are indicators that equal 1 if the person is in grantee g and 0 otherwise; $CSPED$ is an indicator that equals 1 if the person was assigned to the research group that receives CSPED's extra services; X_{i0} is a vector of baseline characteristics, with no intercept; γ , β , and δ are coefficient estimates; and ϵ_{it} is a random disturbance term that is assumed to have a mean of 0, conditional on X , G , and $CSPED$.

As shown in this equation, each regression model includes a series of binary variables indicating each of the eight CSPED grantees, and a set of binary interactions between each grantee and the CSPED extra services (treatment) group. The grantee-specific impact estimates are the regression coefficients associated with these grantee-CSPED interaction variables, represented by β in the equation.

The overall impact estimate is the simple mean of the eight grantee-specific impact estimates, with each grantee weighted equally. The CSPED programs for the eight grantees (and the services available to the regular services group for the eight grantees) were all somewhat different and may therefore have generated different patterns of effects. For this reason, we estimated the overall impact of CSPED by averaging the impacts of the eight grantees. This method allowed us to address the policy-relevant question: "How effective is the typical CSPED grant?"

Program benefit estimates used these impact estimates. For example, a positive earnings impact was easily expressed as an average benefit per participant averaged across the grantees. The benefit-cost analysis included the benefit even if it was based on an impact estimate not statistically different from zero, because even if that estimate was imprecise, it was our best estimate of impact size.