Early Assessment of the Impacts of Multifamily Family Self-Sufficiency (FSS) Programs Administered by Compass Working Capital in Partnership with Preservation of Affordable Housing (POAH)



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# Authors

Haisheng Yang Lesley Freiman Jeffrey Lubell

Abt Associates 6130 Executive Boulevard Rockville, MD 20852

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## Early Assessment of the Impacts of Multifamily Family Self-Sufficiency (FSS) Programs Administered by Compass Working Capital in Partnership with Preservation of Affordable Housing (POAH)

Executive Summaryiv
1. Introduction1
The Compass FSS Model and POAH's FSS Partnerships1
The Compass FSS Model2
POAH Affordable Housing Properties2
What We Know from Existing Research3
This Report3
2. Data and Methods4
Data Sources4
Selecting Comparison Group Households5
Impact Analyses7
3. Impact of Compass FSS on Earnings and Public Benefits Receipt9
Primary Analysis: Impacts of Compass FSS in New England POAH Properties9
Secondary Analysis: Impacts of FSS in POAH Properties Combined Sample10
4. Conclusion12
References13
Appendix A: Selecting Comparison Households14
Appendix B: Sensitivity Analysis17
Appendix C: Exploratory Outcomes through December 2020

# List of Exhibits

Exhibit 2-1. Baseline Equivalence of FSS Households and Matched Comparison Group Households in Primary and Secondary Analysis Samples	6
Exhibit 3-1. Primary Analysis: Impact of Compass FSS Program on Annual Earnings and Public Benefits Receipt, Compass FSS Sample through March 31, 2020	10
Exhibit 3-2. Impact of the FSS Program on Earnings and Public Benefits Receipt, POAH FSS Combined Sample through March 31, 2020	. 11
Exhibit B-1. Impact of Compass FSS Program on Earnings of Household Head, Compass FSS Sample	. 17
Exhibit C-1. Exploratory Analysis: Impact of Compass FSS Program on Earnings and Public Benefits Receipt, Compass FSS Sample through December 2020	20
Exhibit C-2. Exploratory Analysis: Impact of Compass-Model FSS Program on Earnings and Public Benefits Receipt, POAH FSS Combined Sample through December 2020	20

## **Executive Summary**

This report documents the findings of a quasi-experimental evaluation Abt Associates conducted of Family Self-Sufficiency (FSS) programs that Compass Working Capital (Compass) administers in six multifamily rental housing properties in partnership with the nonprofit Preservation of Affordable Housing (POAH). The primary analysis focuses on the early implementation of multifamily FSS in properties where Compass administers the FSS program. This analysis is supplemented by a secondary analysis that includes a large POAH-owned property where Compass provides technical assistance to another FSS operating partner, Community Services League (CSL). To our knowledge, this is the first evaluation of FSS programs administered in multifamily housing properties, where tenants receive Project-Based Section 8 rental assistance.

#### Impacts on Annual Earned Income and Public Assistance Income

We find that participation in one of the FSS programs that Compass administered in six POAH properties in New England is associated with an average increase of \$3,709 (24%) in annual earned

income from the program's launch in 2016 through March 2020. This reflects an average exposure to FSS of 2.5 years, roughly half the initial five- year term of the FSS contract of participation agreed to by the program and families at the program's outset.<sup>1</sup> The analysis focuses on a relatively small sample of 81 households, and the results are marginally statistically significant (p=.054). Participation in one of these FSS programs is also associated with a significant decrease of \$599 (100%) in annual public assistance income in this period.

In a broader secondary analysis that adds 30 households participating in a more recently launched FSS program administered by CSL in a POAH property in Independence, Missouri (for a total sample of 111 households), participation in FSS is associated with an increase of \$1,933 (17%) in annual earned income that is not statistically significant. In this broader sample, participation in FSS is associated with a significant decrease of \$343 (99%) in public assistance income. These findings reflect an average exposure to FSS of 2.2 years.

Though the reduction in public assistance income was highly statistically significant in both the primary and secondary analyses

## Key Findings

- Our primary analysis focuses on 81 households that enrolled in the early stages of six POAH FSS programs administered by Compass Working Capital in New England.
- We find that participation in one of these FSS programs for an average of 2.5 years is associated with a large increase in annual earned income and a large decrease in annual public assistance income through March 31, 2020. The impact on earned income is marginally statistically significant, whereas the impact on public assistance is highly statistically significant.
- In a secondary analysis, we also examine the impacts of FSS on a broader sample of 111 households that adds 30 participants in a POAH FSS program administered by the Community Services League using the Compass model in Missouri. In this broader, shorter term analysis, we find that participation in FSS is associated with a lower increase in annual earned income that is not statistically significant and a significant decrease in public assistance income through March 31, 2020.

<sup>&</sup>lt;sup>1</sup> Families may also request an extension of up to two years if needed to achieve their goals.

(p < .01), this finding should be interpreted with care, as public assistance income is reported for only five percent of households in the combined dataset of FSS and comparison group households).

We selected March 31, 2020, as the ending date for this analysis to balance the goals of (a) having a large enough sample to analyze, given that enrollment into FSS is on a rolling basis over time and (b) minimizing the economic impact of the COVID-19 pandemic, declared by the World Health Organization in March 2020. Our analysis is based on data from annual recertifications of income, ignoring interim recertifications that take place between scheduled annual recertifications. Thus, the pandemic would have affected only a small share of households' recertifications as of March 31, 2020.<sup>2</sup>

We did not separately analyze results for the CSL-administered program in Missouri due to the small numbers of participants in our main analysis period.

#### Family Self-Sufficiency Program and the Compass FSS Model

FSS was established by Congress in 1990 to help participants in two U.S. Department of Housing and Urban Development (HUD) rental assistance programs (the Housing Choice Voucher program and Public Housing) make progress toward economic security. In 2015, Congress authorized HUD to extend the FSS program to a third HUD rental assistance program, Project-Based Section 8, which HUD implemented in August 2016.

Multifamily FSS is voluntary both for owners of Project-Based Section 8 properties, who may or may not choose to administer a program, and for families, who may or may not choose to enroll in FSS, if the program is available. To help enrolled families make progress toward economic security, FSS combines stable affordable rental housing with (a) case management, service coordination, and/or financial coaching to help participants identify and achieve their goals and (b) an escrow savings account that increases in value as participants' earnings and rent contributions rise.

Drawing on experience developed initially with FSS programs serving families in the Housing Choice Voucher and public housing programs, Compass has developed an approach to implementing FSS that focuses on helping families to build assets and improve their financial capabilities. Using participant-centered coaching, Compass helps families identify and achieve their financial goals. CSL, which administers FSS in POAH's Hawthorne Place Apartments, a large property in Independence, Missouri, uses the Compass model, with permission and support from Compass. The FSS programs that Compass and CSL operate in partnership with POAH are funded by POAH along with grants from foundations and other philanthropic organizations.

#### The Partners

Compass is a national nonprofit financial services organization, headquartered in Boston and Philadelphia, that works with public housing agencies and private owners to administer FSS programs for households participating in HUD rental assistance programs. Compass provides technical assistance and support to FSS practitioners via the FSS Link network, which includes multifamily providers such as POAH and CSL. Separately, Compass provided CSL with technical assistance in planning and startup for the CSL-run FSS program in POAH's Hawthorne Place Apartments property.

CSL is a nonprofit service provider in eastern Kansas and western Missouri that works to help individuals build financial stability and self-sufficiency.

<sup>&</sup>lt;sup>2</sup> We conducted a sensitivity analysis that examined impacts through February 28, 2020 rather than March 31, 2020, which produced similar results.

POAH is a national nonprofit organization which provides and preserves stable, affordable housing with the goal of supporting economic security, racial equity, and access to opportunity. POAH is a developer, owner, and operator of more than 12,000 affordable homes in 11 states and the District of Columbia. POAH offers FSS in more properties and has more FSS participants than any other multifamily property owner. As of October 2021, POAH's FSS programs operate in 31 properties and serve 335 households. POAH has enrolled a total of 520 households in FSS programs since they began offering FSS; those not currently in an FSS program have graduated or exited the FSS program without graduating.

#### How We Conducted the Study

For this study, we use quasi-experimental matching methods to estimate the impacts of Compass FSS on the earnings and public benefits receipt of households receiving HUD Project-Based Section 8 assistance in POAH housing properties. As the basis for our analysis, we use the administrative data that HUD collects from multifamily properties when families enter the program and recertify their income to compare the experience of Compass FSS households to that of a comparison group of similar households in other Project-Based Section 8 properties.

The primary analysis focuses on FSS programs in six POAH properties in Connecticut, Massachusetts, and Rhode Island administered by Compass FSS. A secondary analysis adds one large property in Missouri, where CSL administers the FSS program, to create an expanded sample.

As reflected in Appendix C, we also conducted an analysis of impacts through December 2020, ten months into the pandemic. The outcomes for most households in this analysis were measured during the pandemic, so this analysis is exploratory.

#### **Conclusion**

These findings suggest that the FSS programs administered by Compass in the six POAH properties in New England are likely to be effective in supporting earnings growth and reductions in public benefits for program participants. However, the small sample size in our primary analysis – partially due to the intervention of a recession related to the COVID-19 pandemic – limits our ability to make definitive conclusions. This limitation notwithstanding, the direction and magnitude of the impacts we found are consistent with findings from two earlier quasi-experimental evaluations by Abt of the impacts of Compass FSS programs operated in partnership with Massachusetts housing agencies (Geyer et al. 2017; Moulton et al. 2021).

Due to the relatively small number of sample participants in the CSL-administered FSS program in the POAH property in Missouri, we are unable to draw any conclusions about the effectiveness of this program. We are also unable to isolate the effects of FSS from the effects of other differences between the services offered to families at the seven POAH properties and the services available to families in the comparison group; this difference may be particularly significant at the Missouri property, which also includes a Local Initiatives Support Corporation financial opportunity center.

# 1. Introduction

This report documents the findings from a quasi-experimental evaluation by Abt Associates of the early impacts of the Family Self-Sufficiency (FSS) programs administered by Compass Working Capital (Compass) in six multifamily housing properties owned by Preservation of Affordable Housing (POAH). Secondarily, we also report on the combined impacts of these FSS programs administered by Compass and an FSS program administered by the Community Services League (CSL) in a seventh POAH multifamily property, with technical assistance and program model support from Compass.

Compass is a national nonprofit financial services organization headquartered in Boston and Philadelphia. It works with public housing agencies (PHAs) and private owners to administer FSS programs for households participating in the rental assistance programs of the U.S. Department of Housing and Urban Development (HUD). Compass also hosts the Compass FSS Link platform (<u>https://www.compassfsslink.org/</u>), which helps other agencies across the country learn from Compass and one another to strengthen their FSS programs.

FSS is a HUD program designed to help housing assistance recipients increase their earnings and build savings to make progress toward economic security. The standard FSS program has three main components: (1) stable affordable rental housing; (2) case management, service coordination, and/or coaching to help families set and achieve their goals; and (3) an escrow account that increases in value as participants' earnings and rent contributions increase.

The objective of the evaluation is to assess the impact of FSS on the earnings and public benefits receipt of families living in FSS programs administered by Compass in partnership with POAH. To do that, we conducted a quasi-experimental impact analysis that compares the changes in household earnings and cash benefit amounts of FSS participants to those of a matched comparison group of households. All of the FSS participants in our analysis receive Project-Based Section 8 assistance and reside in multifamily affordable housing. Accordingly, we selected comparison group households by matching FSS participants with households receiving Project-Based Section 8 assistance in other multifamily properties in the same regions during the same period.

## The Compass FSS Model and POAH's FSS Partnerships

Compass began administering FSS programming in POAH-owned New England multifamily properties in partnership with POAH in 2015, during which HUD approved an Action Plan for four of the six Compass-administered FSS sites in this study as part of a pilot of the FSS multifamily program. (HUD did not provide final guidance for FSS multifamily programs until August 2016.) In 2017, CSL began administering FSS programming in POAH's Hawthorne Place Apartments, a large property in Independence, Missouri, following the Compass model of FSS. Compass provided CSL with technical assistance and support in initial program planning and set-up, after which CSL proceeded with the program independently.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> For ease of reference, we refer to Compass-administered programs as "Compass FSS." While Compass is responsible for providing coaching services to participating families, both Compass and POAH play essential roles in program operations. The same is true where we refer to the "CSL FSS" program or "CSL FSS"; both CSL and POAH play essential roles in program operations, and Compass has provided technical assistance.

#### The Compass FSS Model

Like traditional FSS programs, the Compass FSS model provides clients receiving housing assistance with two main program services. The first is the opportunity to build savings in an escrow account tied to increased rent paid as a result of increased earnings following enrollment in the program. Participants receive the full balance of these escrowed savings if and when they complete the FSS program. They also have the opportunity to receive interim disbursements of escrowed funds before graduating, if needed to make progress toward their individual goals. The second service is one-on-one coaching to encourage and support participants in increasing their earnings and achieving other goals they have individually identified.<sup>4</sup>

Families join FSS programs voluntarily and must continue to meet with their FSS financial coach periodically to remain in the FSS program. A family's enrollment in, withdrawal from, or graduation from FSS has no impact on their level of housing assistance. To graduate from an FSS program (and receive the full amount of savings accrued in escrow), the head of household must be employed, all household members must have been free of Temporary Assistance for Needy Families (TANF) or other cash welfare assistance for at least one year, and participants must have achieved the goals outlined in their individual training and services plans.<sup>5</sup>

In addition to these traditional FSS program requirements and components, Compass' model of FSS adds several innovative features:

- A strong focus on helping clients build financial capability, pay down high-interest debt, build savings, and improve their budgeting and credit scores, complementing the asset-building that occurs through the FSS escrow accounts;
- A coaching model that emphasizes participant-driven interaction and goal-setting;
- Marketing and outreach that includes a postcard campaign that builds upon families' aspirations for themselves and their children; and
- A public-private partnership model, supported by philanthropy in addition to funds from partner agencies and HUD.<sup>6</sup>

#### POAH Affordable Housing Properties

POAH aims to offer additional services to community members whenever possible in properties it owns or manages.

• New England. In its New England properties where Compass administers FSS, amenities include community centers, recreational facilities, and access to resident services such as savings programs. These properties, which are all included in our study, are Billings Forge in Hartford, Connecticut; Briston Arms, Cromwell Court, and Bay Meadow Apartments in Cambridge, Hyannis, and Springfield, Massachusetts; and Heritage Village I and II and Hillside Village in North Kingstown

<sup>&</sup>lt;sup>4</sup> All FSS programs provide case management or coaching to help participants identify goals and overcome barriers to achieving them. The form of this interaction can vary substantially, however, from one local program to another.

<sup>&</sup>lt;sup>5</sup> HUD is expected to implement new regulations by the end of 2021 that will change some graduation requirements going forward.

<sup>&</sup>lt;sup>6</sup> The Compass multifamily FSS programs are run by Compass in partnership with POAH, a private owner; POAH receives funding from HUD to cover the FSS escrow costs.

and Providence, Rhode Island.

• **Missouri.** POAH's Hawthorne Place, a large property in Independence, Missouri, has an FSS program administered by CSL, following the Compass FSS model that has benefitted from technical assistance from Compass. This property has a community center that houses the Kansas City Boys and Girls Club, a food pantry, a computer lab, and the Financial Opportunity Center through which CSL runs the FSS program. Residents can also access a college savings account program. The FSS program administered in this property is included in a secondary analysis, combined with programs in New England POAH properties receiving Compass FSS.

In addition to POAH, many owners of multifamily properties similarly strive to provide a service-rich environment for residents. However, we do not have information on the services available in the properties where households in the evaluation's comparison groups reside. We are therefore unable to disentangle the specific effects of FSS from the full services bundle (which includes FSS for participating families) provided in the POAH properties.

## What We Know from Existing Research

Despite its nearly 30-year history, FSS has had relatively few rigorous evaluations of its effects, and none in multifamily settings where participants receive Project-Based Section 8 rental assistance. To our knowledge, just four prior evaluations of local PHA-based FSS programs have compared earnings outcomes for FSS participants to those of a matched comparison group.<sup>7</sup> Abt conducted two of these, which focused on programs that Compass administered in partnership with PHAs in Boston, Cambridge, and Lynn, Massachusetts (see Geyer et al. 2017; Moulton et al. 2021). Both of these evaluations found substantial impacts in increasing participant earnings and decreasing receipt of public assistance compared to the FSS participants' matched peers.

HUD has contracted with the research organization MDRC to conduct a randomized controlled trial of a convenience sample of mostly large PHA-based FSS programs. To date, that study has not detected any impact of FSS on earned income or employment, though the evaluation is ongoing, with final results expected in 2022 (Verma et al. 2019). Two national studies commissioned by HUD described earnings gains for FSS participants but did not include data for comparison groups (Ficke and Piesse 2004; De Silva et al. 2011).

See Geyer et al. (2017) for a discussion of research on the effects of housing assistance on earned income.

## **This Report**

In the sections that follow, we provide information on our methodology for the analysis, followed by a presentation and discussion of outcomes. Additional methodological detail is available in the appendix.

<sup>&</sup>lt;sup>7</sup> The four studies: (a) a randomized controlled trial of the Work Rewards pilot in New York City that tested FSS along with conditional cash transfers (Verma et al. 2017); (b) a quasi-experimental study of a Denver program focused on a limited population of intensively treated individuals enrolled in a special homeownership program in addition to either FSS or Denver's Resident Opportunities and Self-Sufficiency program (Santiago, Galster, and Smith 2017); (c) Abt's study of the FSS programs Compass administered in partnership with PHAs in Cambridge and Lynn, Massachusetts (Geyer et al. 2017); and (d) Abt's longer-term study of the FSS programs Compass administered in partnership with PHAs in Cambridge, Lynn, and metropolitan Boston, Massachusetts (Moulton et al. 2021). In addition, Anthony (2005) used regression techniques to study outcomes for FSS participants in Rockford, Illinois.

## 2. Data and Methods

Using quasi-experimental matching methods, we compare the earnings and benefits receipt of households participating in multifamily FSS programs in POAH properties in New England and Missouri to the earnings and benefits receipt of comparable households receiving HUD rental assistance in other, similar Project-Based Section 8 rental properties in the same regions during the same time period.

**Primary Analysis.** Our primary analysis focuses on 81 participants in Compass-administered FSS programs in six New England POAH properties ("Compass FSS"), comprising households that enrolled in FSS at any point from January 2016 through February 2019 and including outcomes through March 31, 2020 (around the start of the COVID-19 pandemic).<sup>8</sup>

**Secondary Analysis.** A secondary analysis looks at POAH-based FSS programs more broadly and combines the 81 Compass FSS households and 30 additional households that enrolled in the CSL-administered FSS program in the Independence, Missouri POAH property through February 2019, including outcomes though March 21, 2020. This combined sample ("POAH FSS") includes 111 households in total.<sup>9</sup>

Ideally, a comparison group would be created through random assignment of households that have expressed a willingness to participate in the FSS programs being evaluated. Since that approach was not available to us, we constructed a comparison group using quasi-experimental methods. Because the characteristics of households that enroll in the voluntary FSS program may differ from those of households that do not enroll, the tenants in POAH properties offering FSS who did not enroll in an FSS program are not a suitable group for comparison. Instead, the comparison group should comprise tenants in other multifamily properties who are most similar to those who chose to enroll in a Compass-model FSS program. For this analysis, we selected a comparison group that is comparable to the Compass-model FSS participants with respect to (1) the baseline characteristics of households, including demographic and income sources; and (2) the tenant and rent characteristics of the multifamily property.

This rest of this section describes our data sources, how we selected comparison group members, and the methods we used to estimate program impacts. More detail on our methodology for selecting comparison households is provided in Appendix A.

#### **Data Sources**

This quasi-experimental impact analysis uses data from HUD's TRACS data systems (including administrative data submitted by multifamily owners as part of Form HUD-50059) provided to us by HUD. We use data that includes all households receiving Project-Based Section 8 rental assistance in all

<sup>&</sup>lt;sup>8</sup> For our primary analysis, we exclude from the sample any households without at least 11 months of follow-up data following enrollment in FSS. We also truncate follow-up data as of March 31, 2020, even though the study dataset includes data through December 2020. We set the cut-off at March 31, 2020 to balance the goals of having a large enough sample to analyze given the rolling admission into the program and minimizing the impact of COVID-19.

<sup>&</sup>lt;sup>9</sup> We also conduct an exploratory analysis of households that enrolled through December 2019, which includes outcomes through December 2020, ten months after the start of the pandemic. This analysis includes 96 Compass FSS participant households and 54 CSL FSS participant households, for a total of 150 POAH FSS households. Results of this exploratory analysis are provided in Appendix C.

multifamily properties in Massachusetts, Rhode Island, Connecticut, Missouri, and Kansas that had a HUD-50059 record from October 2011 through December 2020.

The TRACS data we use for the analysis have several limitations. They do not offer information about households prior to their participation in the Project-Based Section 8 program; nor do they follow households if they leave the Project-Based Section 8 program. We also do not have data explaining why households entered or exited the Project-Based Section 8 program.

We include within each of our analyses the FSS households that have both a baseline annual recertification that captures earnings and public benefits receipt within two years prior to FSS enrollment and a follow-up annual recertification that captures earnings and public benefits receipt at least 11 months after FSS enrollment. We exclude from both the treatment and comparison samples households (1) whose heads of household are age 62 or older or (2) whose heads have a disability as of the time of FSS enrollment (or, for comparison group members, a pseudo-enrollment date used to specify the baseline).

## **Selecting Comparison Group Households**

Our analysis examines what effects the FSS program has on households that choose to participate in it. Accordingly, we require a process for selecting comparison group households (1) who would sign up for one of the FSS programs we are studying if it were available to them; and (2) apart from living in non-treatment properties, are otherwise similar to treatment group households. Treatment group households in our primary analysis sample enrolled in FSS as early as January 2016 and as late as February 2019. A challenge with identifying comparison group households is that we do not observe when comparison group households would have enrolled in FSS if it were offered to them.

To address this challenge, we use a strategy called "rolling entry matching," which involves creating a "quasi-panel matching dataset" (Witman et al. 2019) containing one observation per treatment group household and multiple observations for each potential comparison group household, one for each time the latter's baseline characteristics are observed through an annual income recertification. This strategy helps ensure that a match can be found for each treatment group household from the set of potential comparison households that have a recertification within the same quarter as the treatment household's baseline recertification (i.e., the annual recertification immediately prior to or simultaneous with FSS enrollment).

After constructing the quasi-panel matching dataset, we apply several sample restrictions to arrive at the dataset we use for matching. We drop treatment and comparison group households if we do not observe a post-baseline annual recertification that could be used to construct outcome data.

We conducted nearest neighbor matching of each treatment group household to three comparison group household observations with replacement. To add further precision to our results, we estimate the relationship between participation in an FSS program and each outcome using regression adjustment. To conduct our match, we match individuals using years of program participation; age of household head at baseline; earnings amount at baseline, public assistance amount at baseline, other income amount at baseline, and Social Security amount at baseline; number of children younger than age 3 at baseline, younger than age 5 at baseline, and younger than age 18 at baseline; and the number of adults in household at baseline.

We also include property-level tenant and rent characteristics as covariates for selecting comparison households. Though it is impossible to fully control for the impact on FSS participants of place (e.g., local

neighborhood amenities, local housing market, and regional job market), our approach helps ensure that the tenants included in the comparison sample live in properties with tenant types, ages, race and ethnicity characteristics, and family structures (e.g., households with children or without) similar to the POAH properties with FSS participants. Our matching variables include the combined total of tenant payment plus housing assistance payment, a proxy for local rents that helps control for differences in local economic characteristics.

For the primary analysis, which focuses on FSS participants in New England POAH properties with Compass-administered FSS, we limit potential comparison properties to those in Massachusetts, Connecticut, and Rhode Island. For the Missouri POAH property with CSL-administered FSS, we limit potential comparison properties to those in Missouri and Kansas. Appendix A provides additional details of our household matching methodology.

Exhibit 2-1 below demonstrates that comparison households selected through this approach are very similar, on average, to the FSS participant households in the study, based on their characteristics at baseline. The exhibit presents means and standard deviations for baseline measures of the outcomes of interest separately for treatment group households and matched comparison group households for Compass FSS programs (primary sample) and for the secondary sample of POAH FSS programs that adds the households in the CSL-administered FSS program.

The final column of Exhibit 2-1, labeled "Baseline Balance Effect Size," reports the baseline difference between treatment and matched comparison group households for the outcome variables examined in this analysis, expressed in standardized effect size units. To account for differences in observed characteristics between the treatment and comparison households, we present results (Section 3) that include regression adjustment for baseline characteristics in the treatment and control groups.

Baseline Measure	Compass- Model FSS Mean (\$)	Compass- Model FSS Standard Deviation (\$)	Matched Comparison Mean (\$)	Matched Comparison Standard Deviation (\$)	Baseline Balance Effect Size	
Primary Analysis: Compass FSS (New Englar	nd <i>, n=</i> 81)					
Earnings	13,462.56	13,226.73	12,889.76	11,738.51	0.04	
Public Assistance Income	640.93	1,865.82	597.02	1,820.92	0.02	
SSI, Social Security, and Pension Income	1,344.16	3,829.96	990.48	3,242.90	0.09	
Other Income	1,149.15	3,032.91	866.33	2,695.88	0.08	
Secondary Analysis: POAH FSS (Combined	Secondary Analysis: POAH FSS (Combined, n=111)					
Earnings	13,163.32	12,685.48	12,272.71	11,739.51	0.07	
Public Assistance Income	525.67	1,656.46	454.70	1,568.96	0.04	
SSI, Social Security, and Pension Income	1,077.98	3,409.96	866.28	3,128.82	0.06	
Other Income	1,036.16	2,670.42	879.61	2,588.12	0.05	

#### Exhibit 2-1. Baseline Equivalence of FSS Households and Matched Comparison Group Households in Primary and Secondary Analysis Samples

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. The samples include 81 Compass FSS households and 30 CSL FSS households and their matched comparisons that are used to estimate impacts on outcomes measured in the most recently available annual recertification following FSS enrollment. The Combined sample, including both groups, totals 111 "POAH FSS" participants, across programs. "Public Assistance Income" includes TANF assistance, together with other general direct government assistance, and imputed TANF or direct assistance income. "Other Income" includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

#### **Impact Analyses**

Our impact analyses compare the earnings and public benefits receipt of FSS households to that of a matched comparison group of households.

We constructed four outcome measures that describe household earnings and benefits receipt based on HUD's TRACS dataset from Form HUD-50059,<sup>10</sup> comparing the experiences of the treatment group versus its comparison group through the most recently available annual recertification data as of the end of the time period examined that is at least 11 months after enrollment in FSS.<sup>11</sup> The outcome measures:

- *Annual household earnings*. The sum of all household members' annual earnings reported to HUD in the most recent income certification.
- *Annual Public Assistance Income.* Annual public assistance as measured by the most recent income certification. Public assistance income includes TANF assistance, together with other general direct government assistance and owner-imputed TANF or direct assistance income.
- Annual Supplemental Security Income (SSI), Social Security, and pension income. Annual disability and retirement income as measured by the most recent income certification reported to HUD.
- *Annual Other Income*. Annual other income as measured by the most recent income certification. As defined on Form HUD-50059 for households receiving rental subsidies, includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

For the primary analysis of Compass FSS participant outcomes, all outcomes reflect annual recertifications

## What's included in key outcomes?

- Annual Household Earnings include the sum of all household members' annual earnings reported to the multifamily owner at a given annual recertification.
- **Public Assistance** income includes TANF assistance, together with other general direct government assistance, and multifamily ownerimputed TANF or direct assistance income.
- SSI, Social Security, and Pension income includes Supplemental Security Income (SSI), Social Security, and Pensions income as reported by the multifamily owner.
- Other Income includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

<sup>&</sup>lt;sup>10</sup> Our analysis tracks households over time based on an identification number for the household head. If the head of household changes, our analysis would identify this record as a new household. Shifts in head of household do not happen very often, but represent a limitation of this analysis.

<sup>&</sup>lt;sup>11</sup> The treatment group outcomes are constructed using data from the most recent income certification that occurs at least 11 months after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group match. We include certifications as early as 11 months after FSS enrollment to ensure that we are considering all recertifications that occur at least one year after FSS enrollment, even if the specific day of the recertification within the calendar month was different in the baseline recertification relative to the follow-up recertification.

at an average of 2.5 years after FSS enrollment (or pseudo-enrollment for comparison group members). For the secondary analysis, which includes the more newly-begun CSL FSS program, outcomes are recorded at an average of 2.2 years after FSS enrollment. In measuring outcomes, we focus on annual recertifications only, ignoring interim recertifications that might lead to outcomes being measured at different time periods for the treatment and comparison households.

For each of the two samples (Compass FSS and combined POAH FSS), our analysis computes the impact as the *difference* in the average outcome for FSS participant households versus the average outcome for matched comparison group households. The impact can be interpreted as the change in the outcome measure that is attributable to enrolling in the FSS program. The findings from our analyses are reported in Section 3.

## 3. Impact of Compass FSS on Earnings and Public Benefits Receipt

We find that Compass FSS participants have substantially higher earnings compared to their matched comparison group counterparts, though this impact is only marginally statistically significant. Compass FSS households also have lower public assistance receipt compared to their matched comparison group counterparts.

In this section, we report first on our primary analysis – the impacts of Compass FSS on earnings and benefits receipt for 81 households that enrolled in a Compass FSS program in New England through February 2019. We then report the results of the secondary analysis (POAH FSS combined sample). For both, we focus on outcomes through March 31, 2020, for the reasons discussed in Section 2.

#### Primary Analysis: Impacts of Compass FSS in New England POAH Properties

Exhibit 3-1 below presents the impacts of FSS on the study outcomes for the Compass FSS participants in the New England POAH properties. The columns on the left side of this table show the outcomes for the treatment and comparison groups before we adjusted the results to account for baseline differences between the groups. The columns on the right side of the table show the regression-adjusted impacts, which control for differences in baseline characteristics and represent our primary findings.

After adjusting for differences between the treatment and comparison groups, we find:

- Compass FSS participants have annual household earnings \$3,709 (24 percent) higher (on average) than the earnings of the comparison group as measured by the most recent income certification, but this difference is only marginally statistically significant (*p*=.054). This reflects annual household earnings an average of 2.5 years after FSS enrollment.
- Compass FSS participants have less public assistance receipt than the comparison group.
  - Compass FSS participants have annual public assistance income that is \$599 (100 percent) lower (on average) than that of the comparison group as measured by the most recent annual income certification.
  - Note that this measure may be difficult to interpret because of the low frequency of public assistance income receipt and features such as time limits to receipt of these benefits.
- Compass FSS is not associated with significant impacts on annual SSI, Social Security, and pension income or "other income."

	-	Matche	<b>Regression-Adjusted Results</b>			
Outcome	Treatment Mean ( <i>n</i> =81)	Comparison Mean ( <i>n=</i> 218)	Estimated Difference (Standard Error)	<i>p</i> -Value	Impact <sup>a</sup> (Standard Error)	<i>p</i> -Value
Earnings	\$19,477.11	\$15,287.49	\$4,189.61 (2,585.81)	.11	\$3,709.34* (1,891.63)	.054
Public Assistance Income	\$0.00	\$557.00	-\$557.00*** (144.71)	.00	-\$599.20*** (199.97)	.00
SSI, Social Security, and Pension Income	\$1,294.89	\$1,033.56	\$261.32 (643.55)	.69	-\$86.05 (223.26)	.70
Other Income	\$893.87	\$1,489.88	-\$596.01 (441.76)	.18	-\$366.21 (561.38)	.52
Average Years since Enrollment			2.4	6		

Exhibit 3-1. Primary Analysis: Impact of Compass FSS Program on Annual Earnings and Public Benefits Receipt, Compass FSS Sample through March 31, 2020

<sup>a</sup> This table includes regression adjustment for baseline covariates. The impact can be interpreted as the change in outcome measure that is attributable to enrolling in the Compass FSS program.

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. For all outcomes reported in this exhibit, the treatment group sample size is 81 and each treatment group household is matched to 3 comparison group households (with replacement). Weights are used that result in an effective comparison group sample size that is equal to the treatment group sample size. Treatment group outcomes are constructed using data from the most recent income certification that occurs 1 to 5 years after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group matches within the 1- to 5-year window. "Public Assistance Income" includes TANF assistance, together with other general direct government assistance, and owner-imputed TANF or direct assistance income. "Other Income" includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

Statistical significance levels for two-sided tests are indicated with asterisks as follows: \*\*\*= 1 percent; \*\*= 5 percent; \*=10 percent.

To better understand the extent to which the observed impacts on earnings are driven by the heads of household or other family members, we separately estimate impacts of annual earned income for household heads only and determine the following:

Compass FSS heads of household have annual earnings \$3,591 higher (on average) than the earnings of the comparison group heads of household as measured by the most recent income certification after FSS enrollment (not shown). This estimate is significant at the intermediate level of p < .05.

This analysis suggests that nearly all of the earnings gains attributable to Compass FSS are related to increases in annual earned income by the head of household, rather than by other household members. Note, that this analysis tracks the head of household established at baseline and does not account for changes in head of household over time. To our knowledge, changes in heads of household are infrequent, but could potentially affect these results.

See Appendix B for a more detailed description of these findings.

## Secondary Analysis: Impacts of FSS in POAH Properties Combined Sample

Exhibit 3-2 below presents the impacts of FSS on the study outcomes for the POAH FSS combined sample, which includes Compass FSS and CSL FSS households. In this analysis, we found:

POAH FSS participants have similar annual household earnings to those of the comparison group.

- POAH FSS participants households have annual household earnings that are \$1,934 (14 percent) higher (on average) than those of the comparison group as measured by the most recent annual income certification, but this difference is not statistically significant. This reflects annual household earnings an average of 2.2 years after FSS enrollment.
- POAH FSS participants receive less public assistance income compared to the comparison group.
  - FSS participants receive \$344 less public assistance income on average than the comparison group as measured by the most recent annual income certification. This difference is highly statistically significant (p<.01).
- POAH FSS participants have similar combined amounts of SSI, Social Security, and pension income.
  - FSS participants have annual SSI, Social Security, and pension income that is \$283 (27 percent) lower (on average) than that of the comparison group as measured by the most recent annual income certification, but this difference is not statistically significant.
- POAH FSS participants have lower amounts of income from other sources relative to the comparison group.
  - FSS participants have "other income" that is \$952 (53 percent) lower (on average) than that of the comparison group. This difference is statistically significant at an intermediate level (p < .05).

# Exhibit 3-2. Impact of the FSS Program on Earnings and Public Benefits Receipt, POAH FSS Combined Sample through March 31, 2020

	Matched Results				Regression-Adj	usted Results
Outcome	Treatment Mean ( <i>n</i> =111)	Comparison Mean ( <i>n=</i> 301)	Estimated Difference (Standard Error)	<i>p</i> -Value	Impact <sup>a</sup> (Standard Error)	<i>p</i> -Value
Earnings	\$17,366.28	\$14,218.20	\$3,148.08 (2,268.37)	0.17	\$1,933.86 (1,520.34)	0.21
Public Assistance Income	\$0.00	\$345.06	-\$345.06*** (89.24)	0.00	-\$343.56*** (114.63)	0.00
SSI, Social Security, and Pension Income	\$1,099.78	\$1,053.41	\$46.36 (523.61)	0.93	-\$283.49 (179.49)	0.12
Other Income	\$947.16	\$1,785.48	-\$838.31** (372.75)	0.03	-\$952.19** (415.77)	0.02
Average Years since Enrollment			2.2	21		

<sup>a</sup> This table includes regression adjustment for baseline covariates. The impact can be interpreted as the change in outcome measure that is attributable to enrolling in the FSS program.

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. For all outcomes reported in this exhibit, the treatment group sample size is 111 and each treatment group household is matched to 3 comparison group households. Weights are used that result in an effective comparison group sample size that is equal to the treatment group sample size. Treatment group outcomes are constructed using data from the most recent income certification that occurs 1 to 5 years after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group matches within the 1- to 5-year window. "Public Assistance Income" includes TANF assistance, together with other general direct government assistance, and owner-imputed TANF or direct assistance income. "Other Income" includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

Statistical significance levels for two-sided tests are indicated with asterisks as follows: \*\*\*= 1 percent; \*\*= 5 percent; \*=10 percent.

# 4. Conclusion

In our primary analysis (a period preceding the COVID-19 pandemic), we find that participants in one of the FSS programs administered by Compass FSS in the six multifamily New England POAH properties have higher earnings and lower levels of public assistance income at follow up compared to a set of matched comparison households. In a secondary analysis, we find outcomes in the same general direction in a combined sample that also includes families in the CSL-administered FSS program in Missouri, though the earnings impacts are not statistically significant.

Our findings are consistent with the interpretation that the Compass-model FSS programs in POAH's multifamily properties lead to increased earned income and a reduction in public assistance income. However, we cannot reach a definitive conclusion given the relatively small sample and the marginal statistical significance of the main impacts on earned income in our primary sample. Notwithstanding this limitation, the direction and magnitude of the impacts we see for Compass-model FSS are similar to those found by Geyer et al. (2017) and Moulton et al. (2021) in PHA-based Compass FSS programs.

As documented in Appendix C, our exploratory analysis finds that the impacts of FSS are generally lower ten months into the pandemic, with some previously significant findings becoming insignificant and vice-versa.

Overall, this analysis had a fairly small sample size, which meant that impacts needed to be large to be detectable with statistical significance. It would be helpful to examine the impacts of Compass FSS on earned income and public benefits receipt for a larger sample of multifamily FSS participants at a future date, ideally once the economic effects of the pandemic have subsided. Research is also needed on the impacts of Compass FSS on credit and debt outcomes for multifamily FSS participants, a project Abt has underway.

More broadly, it would be useful for future research to examine whether Compass FSS benefits the children of participants; such benefits could potentially accrue through a range of mechanisms, including increased household income, increased residential stability, or changes in parents' outlook and wellbeing.

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# Appendix A: Selecting Comparison Households

This appendix provides a detailed description of the methods we use to select comparison group households.

#### Selecting Comparison Group Households

The primary research question asks what effect the FSS program has on households that participate in a FSS program. To address this question, we require a process for selecting comparison group households (1) who would sign up for FSS if it were available to them; and (2) who, apart from living in non-treatment properties, are otherwise similar to treatment group households. Treatment group households in our analytic sample enrolled in FSS as early as January 2016 and as late as February 2019 (for the prepandemic period used in our primary analysis that includes an outcomes period through March 31, 2020) and December 2019 (for the exploratory analysis that includes an outcomes period through December 2020, ten months into the COVID-19 pandemic).

A challenge with identifying comparison group households is that we do not observe when they would have enrolled in FSS if it were offered to them. Therefore, it is not obvious which time period should be denoted as their baseline period (capturing their baseline characteristics prior to their would-be FSS enrollment date) and which time period should be used to capture outcomes after their would-be FSS enrollment date. To address this challenge, we use a strategy called "rolling entry matching."

As explained by Witman et al. (2019), rolling entry matching requires a "quasi-panel matching dataset" containing one observation per treatment group household and multiple observations for each potential comparison group household, one for each time the latter's baseline characteristics are observed through an annual income recertification. Treatment group households' baseline characteristics are observed once in the data, based on the last annual income recertification observed prior to FSS enrollment.<sup>12</sup> For potential comparison group households with multiple annual income recertifications, we create multiple observations for each household. For example, if a comparison group household has three annual income recertifications, we create three observations for that comparison group household, where each observation has baseline characteristics constructed from a different annual income recertification. This helps ensure that a match can be found for each treatment group household from the set of the potential comparison households that have a recertification within the same quarter as the treatment household's baseline recertification.

After constructing the quasi-panel matching dataset, we implement a number of sample restrictions to arrive at the dataset we use for matching. We require treatment group households to have an annual recertification in the two-year window prior to FSS enrollment or in the same quarter. We drop treatment and comparison group households if we do not observe post-baseline annual recertification that could be used to construct outcome data (more details on the construction of outcome data can be found below).

We use Stata's *kmatch md* command to conduct nearest neighbor matching. We conduct nearest neighbor matching based on the Mahalanobis distance, matching each treatment group household to three comparison group household observations with replacement. Each of the three comparison group household observations gets a weight of 1/3, which ensures that the effective comparison group sample

<sup>&</sup>lt;sup>12</sup> In practice, baseline characteristics are observed for treatment group households zero to one quarter prior to FSS enrollment.

size is equal to the treatment group sample size (given that we match three comparison group observations to each treatment group household). To add further precision to our results, we estimate the relationship between participation in an FSS program and each outcome using regression adjustment.<sup>13</sup>

To conduct our match, we match individuals using years of program participation; age of household head at baseline; earnings amount at baseline, public assistance amount at baseline, Social Security amount at baseline, and other income amount at baseline; number of children younger than age 3 at baseline, number of children younger than age 5 at baseline, and number of children younger than age 18 at baseline; and the number of adults in the household at baseline. We also match using property-level characteristics, which are documented in the next section.

In addition to the baseline characteristics, we exact match on two key measures. First, we require an exact match for baseline quarter, which ensures that treatment group households and comparison group households have baseline measures constructed based on an annual recertification that occurs in the same quarter. For example, treatment group households whose baseline characteristics are observed in Q1 of 2016 may only be matched with potential comparison group observations whose baseline characteristics were also constructed based on data from Q1 of 2016 (and similarly for other quarters). Therefore, by construction, the baseline quarter of the comparison group household is determined based on the baseline quarter of their matched treatment group household. Second, we conduct matches within region to avoid matching individuals across geographies.

#### Accounting for Property-Level Differences

To account for property-level differences, such as differences related to geography, we include propertylevel covariates as part of the matching process to identify comparison households.<sup>14</sup> In addition, for the New England properties where Compass administers FSS in partnership with POAH, we restrict comparison households' properties to those in Massachusetts, Connecticut, and Rhode Island. For the property in Independence, Missouri, where CSL administers FSS in partnership with POAH, we restrict comparison household properties to those in Missouri and Kansas.

Selecting for comparison households in properties with similar tenant populations and rents is important because Project-Based Section 8 rental properties vary substantially in target rental population, population income and benefits levels, associated services and amenities available, number of bedrooms per unit, appropriateness for specific populations (e.g., families with children, older populations, or populations with a disability), and neighborhood cost of living. Tenant and unit characteristics do not enable us to fully control for the impact of place, property features, or community, but our approach at least helps ensure that the Project-Based Section 8 tenants included in the comparison sample live in comparable properties and areas with similar rent levels to those living in properties with Compass FSS and CSL FSS.

We included the following property-level covariates:

• Age of household head

<sup>&</sup>lt;sup>13</sup> We include as covariates baseline characteristics we use in the matching process. Standard errors cluster at the property level.

<sup>&</sup>lt;sup>14</sup> We exclude properties with FSS programs from the universe of properties from which comparison households are observed. Including only properties without FSS programs allows better modeling of comparison group members. That is, in properties with FSS programs, many of the households that would otherwise be good candidates for the comparison group may be participating in an FSS program other than Compass or CSL.

- Number of children under age 3
- Number of children under age 5
- Number of children between age 5 and 18
- Number of adults
- Gross rent (total tenant payment + housing assistance Payment), a proxy for local rents
- Percentage Hispanic/Latino
- Percentage Black non-Hispanic

We omitted property-level income from our comparison variables in order to improve the quality of matches on household-level income and gross rent, both of which are of greater importance in this analysis. Gross rent is a better measure of local economic conditions than property-level income since it generally reflects broader market conditions and household income is the key outcome of interest.

# Appendix B: Sensitivity Analysis

The impacts we report are based on household income outcomes. In a sensitivity analysis, we examine the impacts on annual income for the household head alone. This sensitivity analysis allows us to better understand whether and to what extent the observed impacts are related to earnings growth among household heads, as opposed to other family members.

#### The Role of Head of Household Earnings

The outcomes reported in Section 3 capture earnings and benefits receipt for the entire household, which includes the head of household (who is the principal FSS participant) and other adult members of the household who are included on the lease. Because the membership of a household can change over time, to add or remove participants, we feel it important to assess whether changes in household membership might explain the impacts we observe. Accordingly, we also estimate impacts on the earnings of the household head alone; that is, excluding earnings outcomes from other household members. We establish the head of household at baseline and track that individual; this analysis does not account for any changes in head of household that may happen after baseline.

	Matched Results				Regression-Adj	<b>Regression-Adjusted Results</b>	
Outcome	Treatment Mean ( <i>n</i> =81)	Comparison Mean ( <i>n=</i> 218)	Estimated Difference (Standard Error)	<i>p</i> -Value	Impact <sup>a</sup> (Standard Error)	<i>p</i> -Value	
Earnings Outcome for Head of Household	\$17,271.22	\$13,769.55	\$3,501.67 (2,417.36)	0.15	\$3,591.16** (1,598.69)	0.03	
Earnings Outcome for Household (as reported in Exhibit 3-1)	\$19,477.11	\$15,287.49	\$4,189.61 (2,585.81)	0.11	\$3,709.34* (1,891.63)	0.054	

# Exhibit B-1. Impact of Compass FSS Program on Earnings of Household Head, Compass FSS Sample

<sup>a</sup> This table includes regression adjustment for baseline covariates. The impact can be interpreted as the change in outcome measure that is attributable to enrolling in the Compass FSS program.

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. For all outcomes reported in this exhibit, the treatment group sample size is 81 and each treatment group household is matched to 3 comparison group households (with replacement). Weights are used that result in an effective comparison group sample size that is equal to the treatment group sample size. Treatment group outcomes are constructed using data from the most recent income certification that occurs 1 to 5 years after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group matches within the 1- to 5-year window.

Statistical significance levels for two-sided tests are indicated with asterisks as follows: \*\*\*= 1 percent; \*\*= 5 percent; \*=10 percent.

As reported in Exhibit B-1, we find:

• Compass FSS heads of household have annual household earnings that are \$3,591 higher (on average) than the earnings of the comparison group heads of household as measured by the most recent income certification after FSS enrollment through March 31, 2020. This is 97 percent of the \$3,709 average gain in earnings for the entire household.

Based on this analysis, it appears that overall household impacts on earnings are mostly driven by increases in earnings from the household head. In Abt's prior studies of Compass FSS programs, Geyer et al. (2017) found that about half of the household earnings gains were attributable to the head of the household; Moulton et al. (2021) found that 76 to 89 percent of the household's earnings gains

(depending on the measure) were attributable to the household head. Why findings across studies are different is unclear. Further analysis of differences in household characteristics between the studies, such as number of non-head of household adults and number of adult children, could provide further insight.

One limitation to this analysis is that the head of household can change over time. While this is infrequent, it is possible, and could possibly have affected these results.

## Appendix C: Exploratory Outcomes through December 2020

This appendix provides details of the results of the exploratory analysis of the Compass FSS and POAH FSS combined sample outcomes using the full span of data available, through December 2020, ten months into the COVID-19 pandemic. Including the full span of available data allows us to add additional sample members who enrolled in FSS between March 2, 2019, and December 31, 2019, or whose only eligible outcomes records fell between April 1 and December 31, 2020. However, for many households, the final recertification used to compute the outcome measures took place after the start of the pandemic, raising the question of whether and to what extent the economic slowdown associated with it may affect results.

Exhibit C-1 provides outcomes for the Compass FSS households only, and Exhibit C-2 provides outcomes for the combined sample of POAH FSS households.

Overall, the results from this analysis are similar in direction to those that were purely in the prepandemic period, but some previously significant impacts become statistically insignificant and vice versa.

- FSS participants have higher annual household earnings than those of their comparison groups, though only the combined sample's difference is statistically significant:
  - Compass FSS households have average annual earnings that are \$2,853 higher than comparison households, but this difference is not statistically significant.
  - The combined POAH FSS sample (which includes households in Compass- and CSLadministered programs) has average annual earnings levels that are \$2,430 (20 percent) higher than those of comparison households. This difference is significant at an intermediate level of p < .05.
  - This analysis reflects annual household earnings an average of 3.11 years after FSS enrollment for Compass FSS participants and 2.67 years after FSS enrollment for the combined sample of POAH FSS participants.
- FSS participants receive less public assistance income compared with comparison households:
  - Compass FSS households have average annual public assistance income that is \$296 lower than comparison households. This difference is significant at an intermediate level of p < .05.
  - Combined POAH FSS households have average annual public assistance income that is \$136 lower than comparison households, but this difference is not statistically significant.

	-	Matcheo	<b>Regression-Adjusted Results</b>			
Outcome	Treatment Mean ( <i>n</i> =96)	Comparison Mean ( <i>n=</i> 269)	Estimated Difference (Standard Error)	<i>p</i> -Value	Impact <sup>a</sup> (Standard Error)	<i>p</i> -Value
Earnings	\$17,969.33	\$13,044.06	\$4,925.26** (2,415.67)	.04	\$2,853.04 (1,789.40)	.11
Public Assistance Income	\$246.63	\$574.85	-\$328.22** (162.36)	.05	-\$450.24** (201.32)	.03
SSI, Social Security, and Pension Income	\$1,323.77	\$1,181.57	\$142.20 (500.68)	.78	-\$67.08 (232.95)	.77
Other Income	\$3,189.76	\$3,092.54	\$97.21 (936.50)	.92	\$520.62 (791.95)	.51
Average Years since Enrollment				3.11		

Exhibit C-1. Exploratory Analysis: Impact of Compass FSS Program on Earnings and Public Benefits Receipt, Compass FSS Sample through December 2020

<sup>a</sup> This table includes regression adjustment for baseline covariates. The impact can be interpreted as the change in outcome measure that is attributable to enrolling in the Compass FSS program.

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. Treatment group outcomes are constructed using data from the most recent income certification that occurs 1 to 5 years after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group matches within the 1- to 5-year window. "Public Assistance Income" includes TANF assistance, together with other general direct government assistance, and owner-imputed TANF or direct assistance income. "Other Income" includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

Statistical significance levels for two-sided tests are indicated with asterisks as follows: \*\*\*= 1 percent; \*\*= 5 percent; \*=10 percent.

# Exhibit C-2. Exploratory Analysis: Impact of Compass-Model FSS Program on Earnings and Public Benefits Receipt, POAH FSS Combined Sample through December 2020

		Matche	<b>Regression-Adjusted Results</b>			
Outcome	Treatment Mean ( <i>n</i> =150)	Comparison Mean ( <i>n=</i> 427)	Estimated Difference (Standard Error)	p-Value	Impact <sup>a</sup> (Standard Error)	<i>p</i> -Value
Earnings	\$15,153.72	\$12,058.22	\$3,095.50 (2,380.17)	.20	\$2,430.25** (1,150.86)	.04
Public Assistance Income	\$208.56	\$392.86	-\$184.30* (100.90)	.07	-\$296.28** (124.60)	.02
SSI, Social Security, and Pension Income	\$961.81	\$974.48	-\$12.67 (404.47)	.98	-\$136.71 (181.17)	.45
Other Income	\$2,722.83	\$2,802.73	-\$79.90 (701.90)	.91	\$76.21 (510.47)	.88
Average Years Since Enrollment				2.67		

<sup>a</sup> This table includes regression adjustment for baseline covariates. The impact can be interpreted as the change in outcome measure that is attributable to enrolling in the Compass-model FSS program.

NOTES: All reported dollar values are inflation-adjusted to 2020 dollars. Treatment group outcomes are constructed using data from the most recent income certification that occurs 1 to 5 years after FSS enrollment; comparison group outcomes are constructed using data from the income certification that occurs closest in time to the income recertification used to construct the outcome for their treatment group matches within the 1- to 5-year window. "Public Assistance Income" includes TANF assistance, together with other general direct government assistance, and owner-imputed TANF or direct assistance income. "Other Income" includes child support, medical reimbursement, Indian trusts receipt, Unemployment Insurance benefits, and income from other nonwage sources.

Statistical significance levels for two-sided tests are indicated with asterisks as follows: \*\*\*= 1 percent; \*\*= 5 percent; \*=10 percent.