Mitigating Benefits Cliffs for Low-Income Families: District of Columbia Career Mobility Action Plan as a Case Study

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Primary issue:
The structure of the United States social safety net features phaseouts of public assistance as household income increases, which can function as an effective marginal tax on wage gains, commonly referred to as a "benefits cliff." These so-called benefits cliffs create a disincentive for low-income workers, especially those with children, to accept higher-paying jobs or promotions. This paper describes how benefits cliffs can affect the financial resources of a single adult, one child family living in the District of Columbia (DC) and introduces the DC Career Mobility Action Plan (Career MAP) pilot program, which serves as a benefits cliff mitigation strategy for participants.

Key findings:
- Due to the co-occurring phaseouts of multiple transfer programs, or benefits cliffs, a hypothetical single adult, one child (aged three) family living in DC would receive no financial gain from a wage increase between $11,000 and $65,000 of earned income.
- Prior to program enrollment in DC's benefits cliff mitigation pilot (Career MAP), the financial disincentives presented by benefits cliffs and high effective marginal tax rates are most pronounced for families with incomes between 50–150 percent and 325–349 percent of the Federal Poverty Level.
- When DC's pilot Career MAP's benefits cliff mitigation strategies are implemented, median effective marginal tax rates decrease for program participants across all income levels.

Takeaways for practice:
The analysis shows that a Hold Harmless Fund (HHF) provision for four major social safety net programs—Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), childcare subsidies, and public health care— considerably reduces effective marginal tax rates compared to the status quo, keeping them below 100 percent and helping families avoid experiencing benefits cliffs. While our analysis shows

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these simulated reductions in effective tax rates, we do not examine how these provisions impact worker outcomes, such as their ability to progress through a career trajectory while on public assistance, nor the longer-term costs and benefits of the program. These two topics for future research—impact on workers and long-term value—are important considerations for other jurisdictions that are considering similar programs.

Mitigating Benefits Cliffs for Low-Income Families: District of Columbia Career Mobility Action Plan as a Case Study

Abstract:

The structure of the United States social safety net features the phaseout of public assistance as household income increases, which functions as an effective marginal tax on wage gains and is commonly referred to as a "benefits cliff." This presents a disincentive for some low-income workers, especially those with children, to accept higher-paying jobs or promotions. Workforce development programs focused on helping low-income workers must contend with the challenges that benefits cliffs present to the career advancement of their clients. In this paper, we describe the overall structure of the public assistance benefits system in the District of Columbia (DC) and describe how benefits cliffs affect the financial resources of a single adult with one child. Afterward, we introduce the DC Career Mobility Action Plan (Career MAP), a five-year pilot program (2022–27), as a case study for implementing benefits cliff mitigation strategies for workers seeking to find employment and increase their earnings. Our findings suggest that Career MAP's policies, which function as rental assistance and cash payments to offset benefits losses, reduce the effective marginal tax rates families experience below 100 percent, helping households to avoid experiencing benefits cliffs.

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Section I: Introduction

Research has shown that the structure of the United States social safety net—featuring phaseouts of benefits as incomes rise—can create disincentives to work by contributing to high marginal tax rates on income gains. Low-income workers, especially those with children, may lose thousands of dollars in transfers and tax credits when they accept a raise or a promotion (Romich et al. 2007, Chien and Macartney 2019, Altig et al. 2020 Richardson and Bizard 2022). Strikingly, Altig et al. (2023) finds that a quarter of low-income workers face lifetime effective marginal tax rates (EMTRs)—or the percentage of resources, defined as net wealth plus human wealth, that workers lose due to a phaseout of public assistance and an increase in taxes following a $1,000 increase in income—above 50 percent. These results suggest that high EMTRs effectively lock low-income workers into poverty.

In some cases, the loss of eligibility for public assistance or tax credits can even leave families financially worse off (a benefits cliff) or no better off (a benefits plateau) than before an increase in income. When that happens, workers can be motivated to either forgo higher paying job opportunities or to decline promotions to retain eligibility.

Prior academic research offers mixed empirical evidence that the structure of the US tax and transfer system can prevent some people from working. A large body of economic literature has examined the effect of the Earned Income Tax Credit (EITC) on extensive and intensive labor supply decisions. A general conclusion of this research is that the EITC increases labor force participation of single mothers with children, with more limited evidence supporting increases in hours of work (see Eissa and Hoynes 2006 and Holtz and Scholz 2003 for a review of this literature). Food assistance is another safety net program that has received significant attention and revealed consistent evidence for the existence of small work disincentives. Fraker and Moffit (1988) find small reductions in hours worked for single female participants. Hangstrom (1996) finds small disincentives for married couples relative to single women. Hoynes and Schanzenbach (2012) find modest reductions in employment and hours worked due to the introduction of food stamps. East (2018) is the only paper that finds a large disincentive effect. They find that the program reduces employment rates for single women by 6 percent, while married men reduce their hours of work by 5 percent.

Findings from Altig et al. (2023), looking at all available public assistance and tax credits, indicate that high EMTRs, and benefits cliffs in particular, can remove financial incentives for career advancement. Using the example of a typical health care career pathway, the authors show that due to the loss of means-tested public benefits, workers can be financially worse off in the short- and medium-term, despite significant positive

financial returns to career advancement in the long-run. These short- and medium-term disincentives might hinder the effectiveness of workforce programs aimed to increase workers' earnings such as the ones discussed in Bloom et al. 2005,[1] Tessler and Seith 2007,[2] and Verma et al. 2017.[3]

In this discussion paper we use the District of Columbia (DC) as a setting to study the extent to which benefits cliffs and plateaus disincentivize career advancement and decrease the potential effectiveness of public assistance programs that focus on helping low-income workers advance out of economic insecurity. The social safety net in DC consists of many programs that provide financial support to low- and moderate-income (LMI) families and help them pay for basic expenses such as food, housing, health care, transportation, and childcare. Some of these programs are federal and either have a fixed structure or set strict guidelines within which states and other sub-national entities have flexibility to adjust program rules. Other programs are local and specific to DC.

In addition, DC has one of the highest costs of living in the United States (Missouri Economic and Research Center 2022). These high expenses can lead to a significant financial hardship when eligibility for benefits is lost. Given these concerns, the social safety net in DC provides a good illustration of how benefits cliffs and high EMTRs, along with a high cost of living, can financially affect families.

We begin our analysis by illustrating benefits cliffs and benefits plateaus for a hypothetical household consisting of a single adult and a three-year-old child living in DC. We further assume that this family receives all major benefits it would qualify for, including a housing subsidy. The housing assistance benefits included here are only available to families that previously experienced homelessness, and the waitlist is currently closed for other low-income families seeking similar housing benefits through the District of Columbia Housing Authority. This family composition fits the profile of a

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[1]Bloom et al. 2005 analyze findings from Jobs-Plus, a multicomponent employment initiative focused on providing rent-based work incentives that allow participants to keep more of their earnings, located in six cities: Baltimore, Maryland; Chattanooga, Tennessee; Dayton, Ohio; Los Angeles, California; St. Paul, Minnesota; and Seattle, Washington. Jobs-Plus increased the earnings of residents relative to a comparison group who were not in the program.

[2] Tessler and Seith 2007 report findings from the Work Advancement and Support Center (WASC), which aimed to increase low-wage workers take-up of work supports—such as, food stamps, public health insurance, subsidized childcare, and tax credits—to increase their household incomes. Moreover, WASC also had the goal of working with low-wage workers to identify career advancement opportunities in the labor market to increase their incomes.

[3] Verma et al. 2017 summarize findings from Opportunity NYC-Work Rewards. The program focused on increasing the employment and earnings of families receiving Housing Choice Vouchers.

typical workforce program participant. For example, the DC Career Mobility Action Plan (Career MAP) program, discussed in detail below, specifically targets people with children and 92 percent of its target participants are heads of single adult households. Moreover, the program encourages participants to apply for all public benefits for which they are eligible. This "representative family" approach allows us to illustrate the general structure of the tax and transfer system, without relying on microsimulation models that typically require access to administrative data or large-scale population surveys.[4]

Afterward, we use the novel Policy Rules Database (Ilin and Terry 2021b) to estimate how the dollar value and composition of public assistance changes with income for our hypothetical family, and to identify at what income levels benefits cliffs and benefits plateaus occur.[5] We find that due to benefits cliffs and the co-occurring phaseouts of multiple transfer programs, the hypothetical family is as financially well-off at $11,000 as it is at $65,000 of earned income. In other words, due to the structure of the combined federal and local DC social safety net, an increase in employment income by $54,000 does not result in any gains in net financial resources for this family.

The representative family approach, however, does not produce population-level estimates and cannot be used to analyze the extent to which EMTRs and benefits cliffs affect LMI families in any given target population (for example, DC residents). The impact of benefits cliffs for this hypothetical family will also change over time as their children age, given that some of the benefits they receive are linked to the young age of their child. Therefore, after analyzing how benefits cliffs and plateaus impact a hypothetical family living in DC, we turn to Career MAP as an example of how benefits cliffs affect the population of low-income DC families that participate in this program. We further explore the effectiveness of benefits cliff mitigation strategies embedded into the program.

Career MAP is a pilot program administered by the DC Department of Human Services (DHS), with The Lab @ DC providing design and evaluation support. The program's development and initial implementation was fully funded through the American Rescue Plan Act of 2021 (ARPA), with a combination of ARPA and District funding supporting ongoing program operations. Over a five-year period, between 2022 and 2027, the pilot

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[4] Representative family approach is frequently used by researchers studying effective marginal tax rates faced by low- and moderate-income families as a result of tax and transfer programs. For example, see Wolfe (2002), Congressional Budget Office (2005), Maag et al. (2012), Richardson and Blizard (2022).

[5] Policy Rules Database is open to the public, available for download at no cost, and can be accessed at https://github.com/FRB-Atlanta-Advancing-Careers/policy-rules-database.

provides resources directly to families who have experienced homelessness and want to pursue career advancement. Importantly, Career MAP implemented a set of program-specific strategies to directly mitigate benefits cliffs for its participants. These strategies include the provision of resources to cover the loss of cash, food, health care, childcare, and housing benefits that can occur as participants achieve new skills for job advancement and increase their incomes. Using administrative data with a rich set of covariates, provided by the DC Department of Human Services, we apply the Policy Rules Database to estimate the EMTR for each Career MAP participant. Afterward, we simulate Career MAP's benefits cliff mitigation strategies and show how they successfully mitigate benefits cliffs, effectively removing a primary financial disincentive for participants to increase their earnings.

We find that without benefits cliff mitigation strategies, Career MAP participants face prohibitively high EMTRs, especially for workers who earn lower incomes. For example, we estimate that participants with income between 50 and 74 percent of the Federal Poverty Level (FPL) face median EMTRs above 100 percent, which indicates a benefits cliff. Further, because of an abrupt loss of the childcare subsidy, the median EMTR is 173 percent for participants with incomes between 325-349 percent of the FPL. Altogether, median EMTRs are elevated above 56 percent for workers with incomes between zero and 299 percent of the FPL. An EMTR of 56 percent or greater is notable given that it is 19 percentage points higher than the top 2023 federal marginal income tax rate of 37 percent, which applies to Heads of Households with more than $578,100 of annual income. We also show that the introduction of benefits cliff mitigation policies in the form of Hold Harmless Funds (HHFs) drastically decreases median EMTRs of Career MAP participants at all income levels, stabilizing them at or below 60 percent. The stabilization of EMTRs at or below 60 percent ensures that working families will retain some of their earnings following a loss of public assistance, relative to the complete loss of any additional earnings that would occur without the HHFs.

This paper proceeds as follows. First, we review the concepts of EMTRs and benefits cliffs and discuss the structure of the DC social safety net. Second, we show how increases in income cause the loss of public benefits and have an impact on the net financial resources of a hypothetical single adult with one child in DC, receiving all major federal and local social safety net programs. Third, we provide a background on the Career MAP program, discuss its benefits cliff mitigation strategies, and estimate the EMTRs that prospective Career MAP participants would face in the first year of the program. Fourth, we simulate the Career MAP benefits cliff mitigation strategies. We illustrate how they reduce EMTRs for our hypothetical household and then estimate the

overall effect on the EMTRs of all Career MAP participants. Finally, we conclude by summarizing the key takeaways for policy and practice.

Section II: Benefits Cliffs in the District of Columbia

2.1 A Review of the DC Social Safety Net

The social safety net in DC supports LMI families through a number of assistance programs. Table 1 lists major federal and local public assistance programs and tax credits available for families living in DC.

Table 1: List of Major Federal and Local Public Assistance Programs and Tax Credits Available in DC

Direct Cash Payments		1. Temporary Assistance for Needy Families (TANF)—*DC** 2. Supplemental Security Income (SSI)—*Federal* 3. Optional State Supplement Payment Program (SSP)—*DC* 4. Social Security Disability Insurance (SSDI)—*Federal*
Tax Credits		1. Earned Income Tax Credit (EITC)—*Federal and DC* 2. Child Tax Credit (CTC)—*Federal* 3. Child and Dependent Care Tax Credit (CDCTC)—*Federal and DC*
In-Kind Public Assistance Programs	**Food**	1. Supplemental Nutrition Assistance Program (SNAP)—*Federal* 2. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)—*Federal* 3. National School Breakfast and Lunch Program—*Federal*
	Housing and Utilities	1. Housing Choice Voucher Program (Section 8)—*Federal* 2. Public Housing Program—*Federal and DC* 3. Family Re-housing Stabilization Program (FRSP)—*DC* 4. Permanent Supportive Housing Program—*DC* 5. Local Rent Subsidy Program (LRSP)—*DC* 6. Targeted Affordable Housing—*DC* 7. Rapid Rehousing for Individuals—*DC* 8. DC Flexible Rent Subsidy Program (DC Flex)—*DC* 9. Low-Income Home Energy Assistance Program (LIHEAP)—*DC*
	Childcare	1. Childcare and Development Fund (CCDF) subsidies—*DC* 2. Free pre-kindergarten—*DC* 3. Head Start/Early Head Start—*Federal*
	Health Care	1. Medicaid for Adults 2. Medicaid for Children/Children Health Insurance Program (CHIP) 3. ACA premium subsidy

Note: This list is not complete and does not include smaller and more targeted local public assistance programs and tax credits. Additional programs might be available in DC for certain populations.

*Text in italics next to the name of each program indicates whether the program rules are set at the federal or at the DC level.

The social safety net in DC is one of the most generous in the nation. To give a few examples, as of 2020, the maximum monthly TANF benefit for a family of three was

$658 (this increased to $696 in October 2022) which is the eighth largest in the nation (Urban Institute 2022). While most states have time limits and full family sanctions,[6] DC has lifted time limits and capped the sanction at 6 percent. Furthermore, DC has invested in case management for individuals receiving TANF and participating in SNAP Employment and Training (E&T). DC has also invested in childcare and early childhood education. Under Broad Based Categorical Eligibility,[7] DC expanded the SNAP eligibility threshold from 130 percent of the FPL to a maximum allowed level of 200 percent of the FPL. DC is also one of just a handful of states or other sub-national entities with a state-level EITC and Child and Dependent Care Tax Credit to provide additional financial support to low-income working families.

This network of public assistance programs and tax credits provides financial support to LMI DC residents. Financial support from these programs can be critical for households, particularly if they are receiving housing assistance in a high-rent market such as DC. As we show below, this creates significant financial losses for families once the programs start to phase out.

2.2 An Example of Benefits Cliffs in DC

As we noted, LMI workers and their families are eligible for and often receive a variety of public assistance and tax credits that are often means-tested and have strict income eligibility thresholds. The gradual or abrupt loss of these benefits as income rises acts as an effective marginal tax on additional employment income (Chien and Macartney 2019, Altig et al. 2020, Richardson and Blizard 2022). High EMTRs can become benefits cliffs when multiple programs phase out at the same income level or when the family abruptly loses eligibility for large benefits. When EMTRs are high, they can exceed 100 percent, which means that for every $1.00 of additional income earned a family loses more than $1.00 of net income—from benefits and earnings combined—due to an increase in taxes and decline in benefits.

To illustrate the structure of the social safety net in DC, including benefits cliffs (EMTR of greater than 100 percent) and benefits plateaus (EMTR equal to 100 percent), we plot in figure 1 net resources and public assistance by employment income for a hypothetical single adult with one child, aged three. To demonstrate how program eligibility and the

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[6] A TANF sanction is a temporary reduction in benefits that occurs when a recipient does not meet the program's work requirements. A full family sanction is the termination of an entire public assistance payment for a period of time.

[7] Broad based categorical eligibility stipulates that households become categorically eligible for SNAP because they qualify for TANF or state maintenance of effort funded benefit.

dollar value of benefits differ depending on the number of adults and the number of children in the household we provide a similar analysis for three additional family types in Appendix A—a single adult with a school-aged child (five years old), and a single adult with two children (ages three and five).

The chart in figure 1 consists of two panels. The top panel illustrates the benefits cliffs and plateaus for our hypothetical family. On the horizontal axis is the family's annual employment income; on the vertical axis is the family's annual net resources defined as a family's after-tax income, plus public assistance and tax credits, minus a set of basic expenses that includes housing, childcare, health insurance, food, transportation, and other miscellaneous expenses.

The bottom panel of the chart in figure 1 shows how the dollar value of public assistance programs and tax credits changes as income increases and determines the income levels at which the loss of public assistance occurs. Black vertical lines across both panels highlight the range of annual employment income within which any increase in income is offset by a decline in public assistance that can make the family financially worse off or as well off as before the raise. In other words, this is the range of employment income where benefits cliffs and benefits plateaus occur.
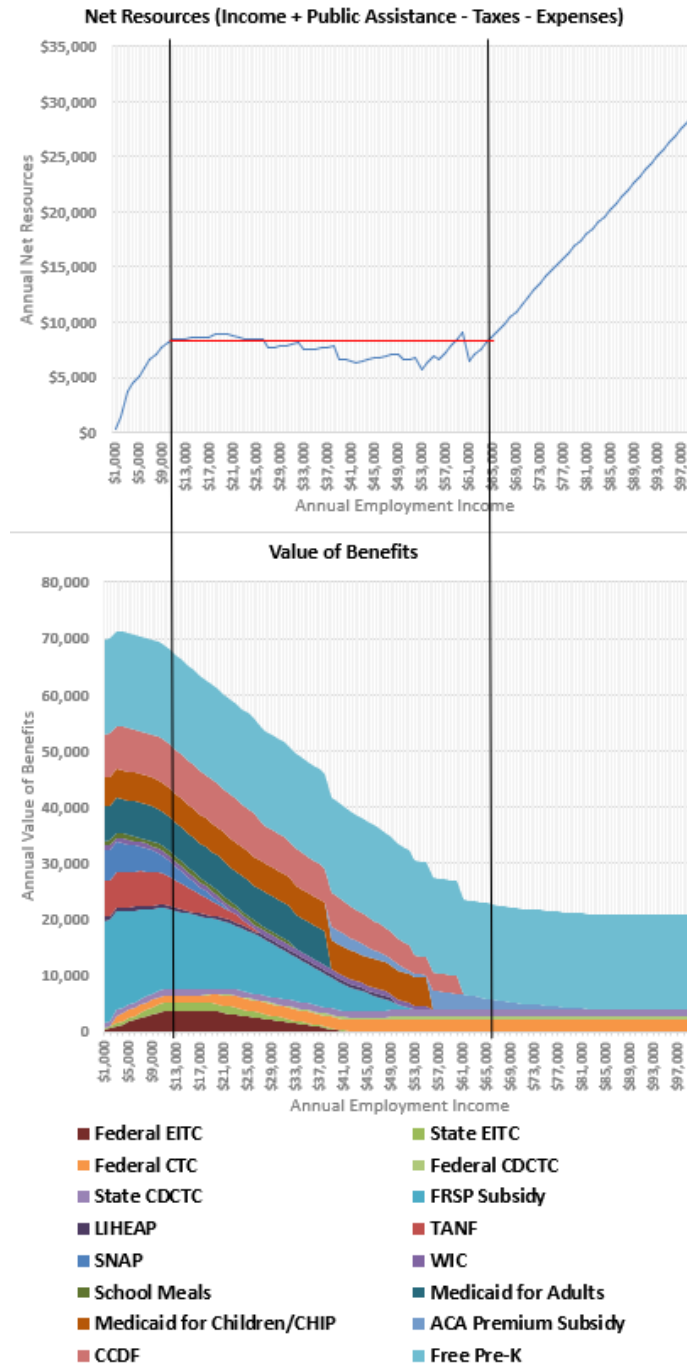
We assume that the family receives all public assistance programs and tax credits outlined in table 1 that it is eligible for. Additionally, because the first cohort of Career MAP participants was recruited out of the DC Family Re-Housing Stabilization Program (FRSP), we assume that the family receives housing support from FRSP, and not from any other available local or federal program. The FRSP is a time-limited program designed to assist families experiencing homelessness. It requires families to pay 30 percent of their earnings towards rent while the rest is covered by the program. Finally, we assume that the hypothetical family does not have disabled members. Thus, our analysis does not include SSI, SSP, and SSDI. The family's total tax liability and the dollar value of each public assistance program and tax credit is estimated using Policy Rules Database (Ilin and Terry 2021b).

The top panel of figure 1 shows that for this family, annual net resources decrease after $11,000 of earned income, and remain below that amount until the family's income exceeds $65,000. At both income levels annual net resources are equal to $8,500, which indicates that between $11,000 and $65,000 our hypothetical family experiences no overall financial gain from an increase in earnings. As shown in the bottom panel, an increase in income from $11,000 to $65,000 results in a complete or partial loss of most of the public assistance programs and tax credits. Paired with an increase in tax liability, these losses fully offset income gains. The chart on the bottom panel shows that at

$11,000 the family is almost eligible for the maximum amount of each benefit and tax credit. However, at $65,000, the family is eligible for about one-third of that level of assistance.

The top panel of figure 1 identifies the income levels at which benefits cliffs occur. We observe that at certain levels of employment income within the $11,000 to $65,000 range the family's net resources dip. It means that the combined loss of public assistance programs outweighs the gain in income, meaning the family faces benefits cliffs. The first dip occurs at $22,000 when the family loses access to SNAP. A second benefits cliff occurs at $27,000, where the family loses TANF. That is followed by several small benefits cliffs that occur due to the loss of school meals, WIC, federal and state EITCs, Medicaid for Adults, and Medicaid for Children/CHIP. Finally, at $61,000 the last and the largest benefits cliff occurs, which entails a loss of the CCDF childcare subsidy.

Figure 1: Benefits Cliffs in DC for a Hypothetical Family: Single Adult with One Child (Aged Three)

Net Resources (Income + Public Assistance - Taxes - Expenses)

Value of Benefits

■ Federal EITC	■ State EITC
■ Federal CTC	■ Federal CDCTC
■ State CDCTC	■ FRSP Subsidy
■ LIHEAP	■ TANF
■ SNAP	■ WIC
■ School Meals	■ Medicaid for Adults
■ Medicaid for Children/CHIP	■ ACA Premium Subsidy
■ CCDF	■ Free Pre-K

Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

14

In table 2, we provide estimates of the dollar value of each program and tax credit that the family is eligible for at $11,000 and $65,000 in annual employment income. Additionally, the table estimates the federal and state income tax liability as well as Federal Insurance Contributions Act (FICA) payroll tax. By increasing income from $11,000 to $65,000, the family loses eligibility for TANF, federal and state EITC, SNAP, WIC, subsidized school meals, FRSP subsidy, LIHEAP, CCDF, Medicaid for Adults, and Medicaid for Children/CHIP. These losses are partially offset by gains in federal CTC and federal and state CDCTC, which are non-refundable credits that families can get only once their income is high enough to have tax liability. The ACA premium subsidy increases because once a family loses eligibility for Medicaid, it can switch to subsidized coverage through the Health Insurance Marketplace. Free pre-K is unaffected. Overall, we estimate that at an income of $11,000, our hypothetical family is eligible for $68,686 in government support. At an income of $65,000, the family can expect to receive roughly a third of that assistance ($22,709). The family's overall tax liability also increases, growing from $842 to $12,835. This loss of public assistance combined with an increase in taxes fully offsets a $54,000 income gain.

Table 2: Dollar Value of Public Assistance, Taxes, and Tax Credits at $11,000 and $65,000 in Employment Income for a Hypothetical Family: Single Adult with One Child (Aged Three)

Program	$11,000 in Annual Employment Income	$65,000 in Annual Employment Income
TANF	5,325	0
Federal EITC	3,584	0
State EITC	1,434	0
Federal CTC	1,400	2,000
Federal CDCTC	0	600
State CDCTC	1,010	1,202
SNAP	3,162	0
WIC	876	0
School Meals	808	0
FRSP Subsidy	14,630	0
LIHEAP	540	0
CCDF	7,702	0
Free Pre-K	16,908	16,908
Medicaid for Adults	6,203	0
Medicaid for Children/CHIP	5,104	0
ACA Premium Subsidy	0	2,080
Public Assistance - Total	**68,686**	**22,709**
Federal Income Tax	0	5,260
State Income Tax	0	2,603
FICA Tax	842	4,972
Tax Liability - Total	**842**	**12,835**

Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

2.3 Effective Marginal Tax Rates

As discussed above, financial losses due to phaseout and loss of public assistance, or benefits cliffs, are also known as EMTRs on additional earnings. The EMTR is defined as a share of income that is effectively lost (or 'taxed away') because of an increase in tax liability or decline in means-tested public assistance and tax credits. In this section we estimate EMTRs for our hypothetical single adult family with one child.

To estimate EMTRs we use the following formula (equation 1): we first construct "net resources," which is defined as a family's after-tax income, plus public assistance and tax credits, minus a set of basic expenses. Our list of basic expenses includes housing, childcare, health insurance, food, transportation, and other miscellaneous expenses. Formally, we define household's net resources (NR) as:

$$NR = y + PA(y) - Tax(y) - Exp(y),$$

where y is the household's total earnings; PA is the estimated value of household's total public assistance and tax credits, which is a non-linear decreasing function of earnings;[8] Tax is a total tax liability, which is a non-linear increasing function of earnings; Exp is the household expenses and is calculated using the Cost of Living Database (Ilin and Terry 2021a).[9] Exp is a function of earnings because we assume that the cost of health insurance depends on what type of health insurance is the lowest cost option, which will vary based on the household's eligibility for public health insurance.

We use the following formula (equation 2) to measure EMTR for each household:

$$emtr(y) = 1 - \frac{\Delta NR}{\Delta y},$$

where Δy is an assumed increase in income.

For the purposes of this analysis, we calculate EMTR at intervals of $1,000 increases in employment income. An EMTR above 100 percent means that additional $1,000 in employment income leads to a loss in net resources—a situation that we call a benefits cliff. Figure 2 plots EMTRs by employment income for our hypothetical single worker with one child, aged three. Between $11,000 and $22,000, phaseouts of the FRSP subsidy, SNAP, TANF, and state and federal EITC increase the family's EMTR to 100

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[8] Except EITC which increases with earned income up to a certain point and CTC whose non-refundable portion increases with income.

[9] See atlantafed.org/economic-mobility-and-resilience/advancing-careers-for-low-income-families/cost-of-living-database.aspx.

percent. This means that if the family has income within this range, any $1,000 increase in income would be fully offset by the loss of public assistance and increase in taxes. At an income of $22,000, a SNAP benefits cliff occurs that results in an EMTR above 100 percent. The first cliff is followed by seven spikes in EMTRs above 100 percent, with each spike corresponding to the loss of public assistance or tax credits, illustrated on the bottom panel of figure 1 and discussed above. The last EMTR spike occurs when the family's income increases to $61,000, indicating the loss of CCDF, which results in a 358 percent EMTR.

Figure 2: Effective Marginal Tax Rates on a Series of $1,000 Earnings Gains for a Hypothetical Family: Single Adult with One Child (Aged Three)
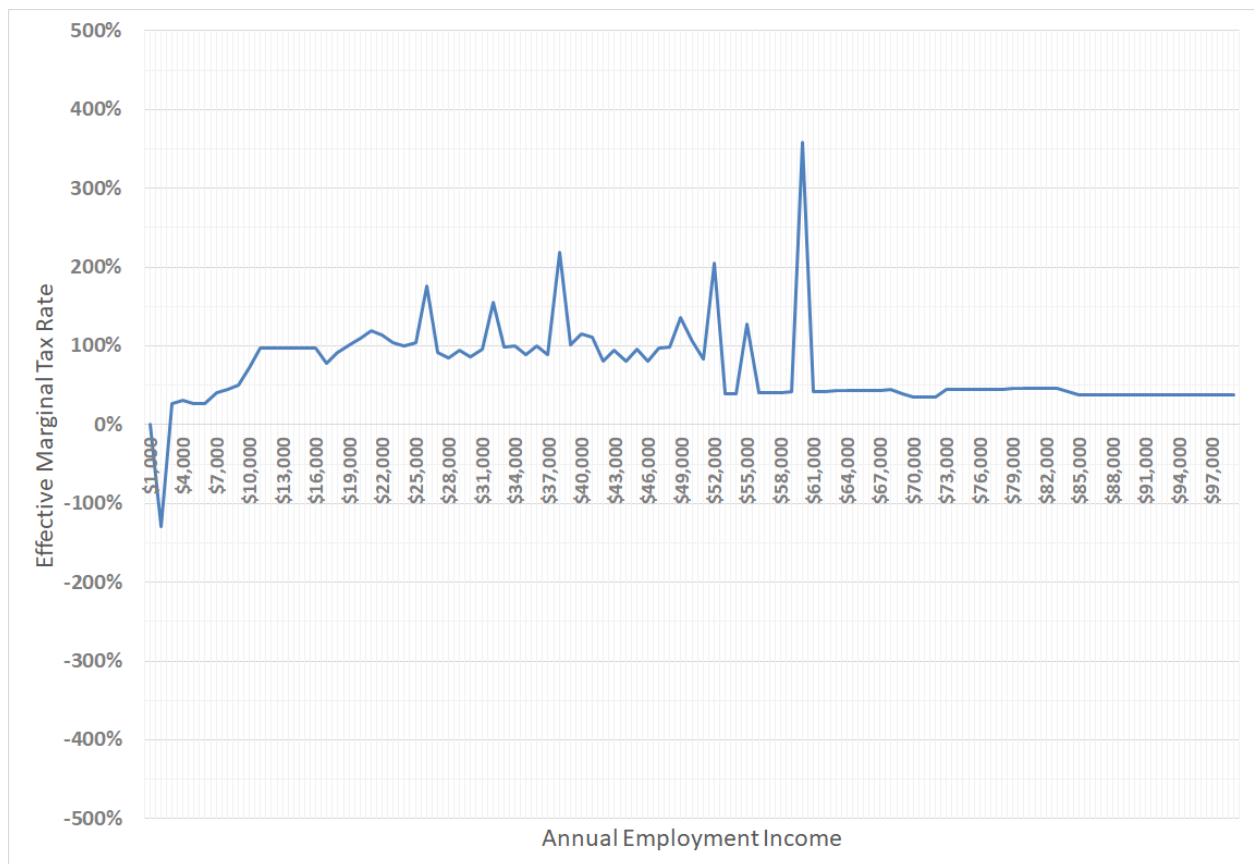
Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

Figures 1 and 2 illustrate how the structure of the social safety net in DC can create disincentives for workers, including participants of employment and training programs, to move to higher paying jobs to support their family. EMTRs near or above 100 percent remove a financial incentive for career advancement. Some workers and workforce

development participants would be better off financially keeping a low-wage job, rather than seeking employment in higher-paying occupations. In the next section, we demonstrate the problem of benefits cliffs and EMTRs in the context of how they impact workers and their families in a local DC workforce development program: Career Mobility Action Plan (Career MAP).

Section III: Benefits Cliff Mitigation Strategies: Career MAP as a Case Study

3.1 Career MAP Program Background

The DC Career MAP program is a pilot program that provides rental assistance, personalized coaching to help participants achieve their career goals, and cash payments to help offset the loss of public assistance as earnings increase. The program is fully funded through the American Rescue Plan Act of 2021. The program was launched in December 2022 and randomly selected 600 families who were participating in the Family Re-Housing Stabilization Program and applied for the program in Summer 2022. The Lab @ DC is leveraging the random assignment of applicants to evaluate the program.

Career MAP consists of three main pillars: 1) household resources, 2) career advancement, and 3) family support. Each pillar focuses on several key components that are relevant for a participating family's well-being: career pathways, child development, financial assets, health and well-being, and social capital. Career MAP also recognizes that some program participants will face benefits cliffs as they increase their earnings. Thus, Career MAP includes a system of benefits cliff mitigation strategies designed to remove financial barriers that participants may face as they advance in their careers. We briefly summarize each of the three Career MAP pillars and the program's benefits cliff mitigation strategy below.

Pillar 1: Household resources

Household financial resources are an integral part of a participant's benefits package. These resources include a housing subsidy that limits participants' rent payments to 30 percent of their income for five years, including both earned and unearned income. Participants are also supported with an escrow account that provides them with $200 deposits each month that they pay their portion of rent (a maximum deposit amount of $12,000 over five years, accessible after four years or upon early exit, which includes if a participant drops out of the program). Finally, emergency payments of up to $1,000 per

year are provided to assist with financial difficulties and work and education support when needed.

Pillar 2: Career Advancement

Career advancement services, such as advising, matchmaking, and education and job training, are an additional resource available to participants. These resources consist of career advising through a dedicated navigator, or coach, that helps participants pursue their career goals. Moreover, there are dedicated DHS staff focused on maintaining relationships with regional employers and other partners to find career track opportunities. These include paid work-based learning roles, or working in an environment that is closely related to a participant's career pathway, and promotions after initial job placements. Education and job training services include higher education and vocational training programs that are aligned with employer hiring demand, and assistance in accessing available financial aid through a combination of Career MAP, grantee, and partnership resources.

Pillar 3: Family Support

Family support services are the last group of resources provided to participants. Services include dedicated coaching that helps the participant identify family goals and peer support groups that allow participants to build a network among others in the program. Dedicated advising for financial management, including benefits cliffs, are available to participants as needed. Lastly, the program coordinates access to other supports that may be needed for the wellbeing of family members, including mental and physical health and wellness, early childhood and K-12 education, legal aid, and other services.

3.1.1 Benefits Cliff Mitigation Strategies

Career MAP includes a system of strategies to mitigate benefits cliffs. First, rental assistance is structured in such a way that participants pay 30 percent of their current income on rent, minus any lost SNAP or DC TANF cash assistance benefits. For example, an earnings increase that would result in a $100 loss of TANF and SNAP would trigger a rent payment equal to 30 percent of income minus this $100 lost in benefits. Rent reductions to compensate for a loss of SNAP and cash assistance do not count as income for the purposes of calculating eligibility or benefit amounts in other programs.

The program also provides a cash fund of up to $10,000 per year that reimburses participants through direct payments for losses of medical and childcare benefits as a family's income increases, as well as for any SNAP or TANF losses that can't be covered

through rent discounts. Career MAP cash fund payments are exempted from counting towards TANF eligibility under DC implementation legislation, and payments to any participants still receiving SNAP benefits are made through a lump sum payment rather than monthly installments to limit any reductions in SNAP benefits. The program imposes a cap of $10,000 per year on the amount of cash funds. This cap may be increased if funds are available. Therefore, for the purposes of this analysis we assume no cap on the amount of cash assistance that the family can receive per year. This assumption allows us to estimate the full effect of the program and abstract from the agency-specific funding constraints. Altogether, these rent reduction and cash payment benefits cliff mitigation strategies form a Hold Harmless Fund (HHF) for program participants. Throughout the rest of the paper we use the terms "Career MAP benefits cliff mitigation strategies" and "HHF" interchangeably.

3.1.2 Characteristics of Career MAP Participants

In the summer of 2022, 1,438 families applied for the Career MAP program, with 600 program slots filled via a random lottery selection process. Only DC residents participating in the DC DHS's Family Re-Housing Stabilization Program (FRSP) at that time were eligible to apply. To be eligible for the FRSP, a family must be a DC resident and experience homelessness or be at an imminent risk of experiencing homelessness. Table 3 provides summary statistics for 2,512 FRSP program participants that were active in the program in January 2022. The FRSP participant summary statistics found in table 3 represents the full population of FRSP families that were eligible to apply for Career MAP, but may differ from the Career MAP subpopulation, given that the latter group is a distinct and smaller subsample of what is reported. Career MAP enrollment and selections were still ongoing at the time of this report's analysis, so disaggregated data for the 600 families are now participating in Career MAP were not available.

Table 3: Characteristics of FRSP Participants as of January 2022

Total number of families	2,512
Average family size	3.05
Average number of children	1.96
Average annual earned income (among employed)	$23,089
Share of families without earned income	71%
Share of families with disabled members	20%
Share of families who receive SNAP	85%
Share of families who receive TANF	71%
Share of families who receive SSI	13%
Share of families who receive SSDI	24%

Sources: DC Department of Human Services and The Lab @ DC. Data is from a point in time in January 2022 and includes families for which all relevant data were available at that time. Program participation varies over time as families move into and out of the program.

The majority of FRSP recipients in 2022 did not have earned income (71 percent); and they generally received financial support from SNAP (85 percent) and TANF (71 percent). Additionally, a sizable portion of participants (20 percent) had disabled family members. Among all FRSP participants, 13 percent received SSI benefits and 24 percent received SSDI. Additionally, recipients of SSDI and other participants that have significant disabling conditions that limit earnings are typically eligible to transfer into other permanent supportive housing programs, minimizing the number of Career MAP participants receiving these benefits. Notably, Career MAP does not include a benefits cliff mitigation strategy for either SSI or SSDI. Information on the receipt of other benefits (for example, WIC, Medicaid/CHIP, tax credits, etc.) was not available in this dataset.

3.2 Distribution of Effective Marginal Tax Rates Among FRSP Participants

To better understand the disincentives that prospective Career MAP participants would face in the first year of the program, we use equations 1 and 2 to estimate the EMTRs for

each FRSP participant in the dataset. For this estimate, we made several assumptions given the incomplete data across four indicators: total income, tax filing status, dependent ages, and benefits packages.

- We assume that earned income, TANF, SSI, and SSDI are the only sources of income for participating families. This means that our analysis would not be inclusive of other potential sources of income that may affect a participant's total finances (for example, investment income, child support income, gifts, etc.), likely leading to an underestimation of income. Furthermore, we also assume participating families owned no assets, which might lead to an overestimation of public assistance program eligibility in some circumstances.

- Each participating family's tax filing status is imputed based on the number of individuals in a household. For example, a one-person household is assumed to be a single tax filer, a two-adult household was assumed to be filing jointly, and a single adult with a child was assumed to be a head of household filer.

- The age of children in each household is assigned randomly and derived from data provided by the DC DHS. The probability of each child's age is based on the distribution of program participants between ages zero and 18 years old.

- We assume that all participants receive all public assistance benefits for which they are eligible. This assumption likely leads to an overestimation of both EMTRs and the dollar value of the HHF. The Career MAP program encourages participants to apply for all additional support available to them, making it reasonable to assume participants are likely receiving some combination of benefits. However, this assumption places each family in our dataset into a more ideal situation than is likely the case. Consequently, our results should be considered upper-bound estimates for household benefits receipt and the value of the HHF.

To illustrate the extent to which the last assumption matters, table 3 reports the share of FRSP participants that are eligible for each major public assistance program and tax credit. The eligibility status is determined for each participant in the dataset using the Policy Rules Database.

Based on our estimates, 81 percent of FRSP participants are eligible for TANF and 88 percent are eligible for SNAP. At the same time, as table 1 shows, at the outset of the Career MAP program, 71 percent of participants report receiving TANF benefits and 85 percent report receiving SNAP benefits. According to the last assumption, we assign participation status to those FRSP participants who report that they do not receive the benefit but are eligible for it according to our estimates.

Table 4: Share of FRSP Participants Determined to be Eligible for Public Assistance Programs and Tax Credits

Program	Share of Eligible Participants
TANF	81%
EITC (Federal and State)	14%
CTC (Federal and State)	14%
CDCTC (Federal and State)	19%
SNAP	88%
WIC	23%
School Meals	44%
CCDF	46%
Free Pre-K	30%
Medicaid for Adults	48%
Medicaid for Children/CHIP	50%
ACA Premium Subsidy	2%

Sources: Policy Rules Database (Ilin and Terry 2021b), the DC Department of Human Services, and authors' calculations.

Figure 3 plots median EMTRs faced by FRSP participants across a range of incomes that are represented as a percentage of the FPL for each family type included in the administrative data.[10] We allocate all FRSP participants into brackets based on their income relative to the FPL and calculate median EMTRs across families in each bin.[11]

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[10] Exact income estimates for the FPL, expressed as dollar amounts for various family types, are distributed annually by the Department of Health and Human Services (HHS). "Poverty Guidelines." Office of the Assistant Secretary for Planning and Evaluation, January 19, 2023. https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines.

[11] In figure 3, 54 percent of the observations are families with incomes below 100 percent of the FPL, and 86 percent of observations are below 200 percent of the FPL.

EMTRs are calculated using equation 2 assuming a $5,000 increase in earnings.[12] Median EMTRs above 100 percent mean that for more than a half of families in a given income bin, an additional $5,000 in employment income results in a benefits cliff.

Families with income below 25 percent of the FPL face a median EMTR of 71.6 percent. As SNAP, TANF, FRSP, and EITC start to phase out, the median EMTR rises indicating a benefits cliff or a net loss of income. In our dataset, rising EMTRs begin to occur for families with incomes between 50 and 75 percent of the FPL where the cumulative rate exceeds 100 percent. Finally, we observe a large spike in EMTRs of up to 173 percent for those with income between 325 and 350 percent of the FPL, corresponding to a benefits cliff prompted by the phaseout of the CCDF childcare subsidy.

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[12] The analysis in figure 2 assumed a $1,000 increase to calculate a baseline measure of EMTRS. The analysis in figure 3 and in subsequent EMTR estimates assume a $5,000 increase to approximate a possible wage gain due to career advancement. We reasoned that individuals graduating a training program are likely to experience a larger earnings gain than $1,000 and thus chose $5,000.

Figure 3: Median Effective Marginal Tax Rates at the Entry into Career MAP on a $5,000 Earnings Gain, Grouped by Percentage of the Federal Poverty Level for All FRSP Participants
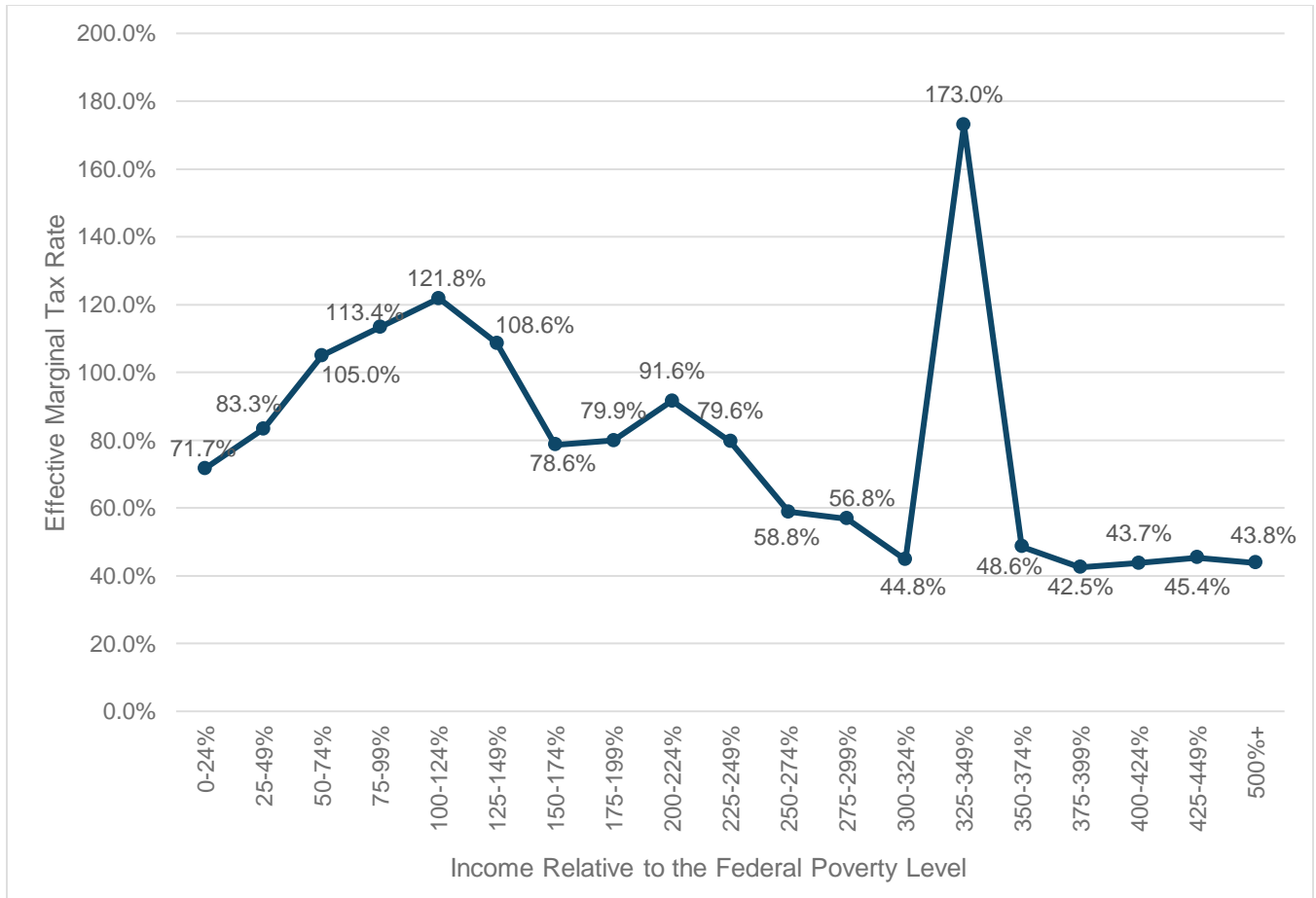
Sources: Policy Rules Database (Ilin and Terry 2021b), DC Department of Human Services, and authors' calculations.

3.3 Simulating Career MAP Benefits Cliff Mitigation Policies

Figure 3 demonstrates that in the absence of a benefits cliff mitigation strategy, high EMTRs might create financial disincentives for Career MAP participants to achieve new skills for job advancement and increase their earnings. These disincentives are most pronounced for families with income between 50 percent and 149 percent of the FPL and those with income between 325 percent and 349 percent of FPL. To alleviate these financial disincentives, the Career MAP program introduced policies (discussed in section 3.1) that remove benefits cliffs for program participants. To analyze how

successful these program policies are in mitigating benefits cliffs, we simulate them and re-estimate the EMTRs with the strategies in place.

We simulate the adjusted rental assistance amount to participants, which is equal to the cost of rent, minus 30 percent of a participant's income, plus the value of any SNAP or TANF benefits lost due to income increases. Additionally, we simulate the direct cash payments to the program participants that are designed to reimburse participants for losses of medical and childcare benefits as a family's income increases, as well as for any SNAP or TANF losses that can't be covered through rent discounts.

We first illustrate how the HHF would affect a hypothetical family, again using the example of a single adult with one three-year-old child. Next, we use the administrative data on FRSP participants, provided by the DC DHS, to simulate the impact of these policies on the prospective Career MAP program participants.

3.3.1 Results: A Hypothetical Family

We start our analysis by simulating the effect of the proposed HHF on the hypothetical family's net resources and EMTRs. We also disaggregate the cost of the HHF by the type of public assistance for which the participant is being compensated (SNAP, TANF, childcare or health care).

Figure 4: Impact of HHF on Annual Net Resources for a Hypothetical Family: Single Adult with One Child (Aged Three)
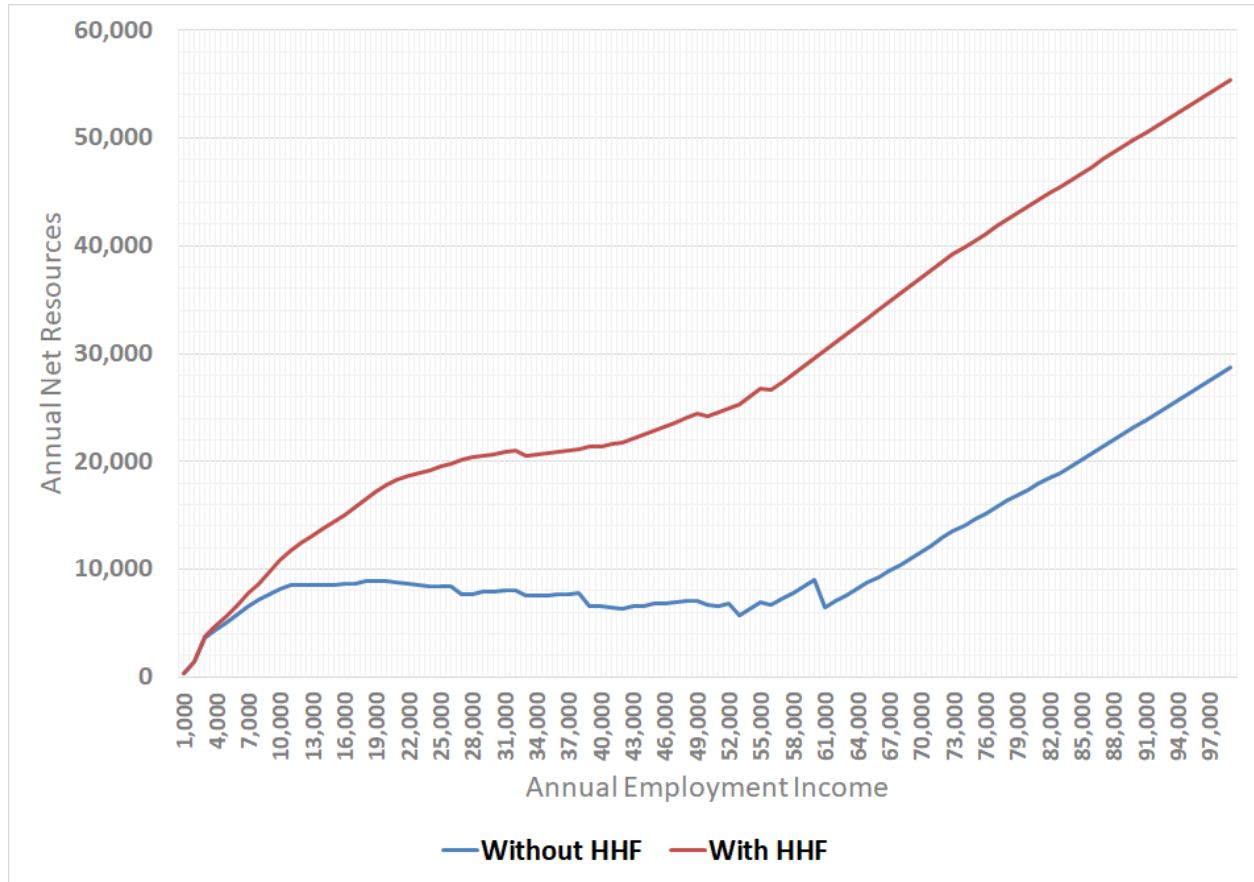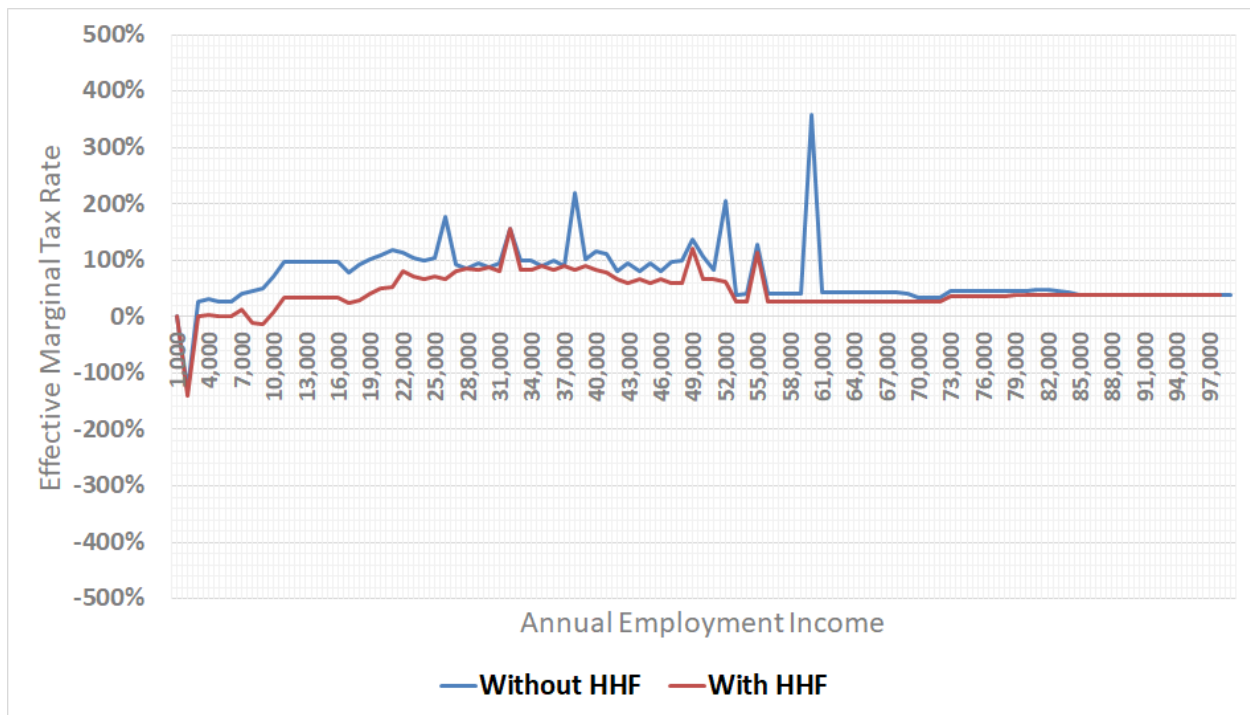

Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

Figure 4 shows the annual net resources of the hypothetical family at intervals of $1,000 income increases with and without HHF (red and blue lines respectively). The impact of the HHF is twofold. First, the introduction of the HHF increases the family's net resources to the maximum possible amount at each income level. This occurs because the HHF prevents public assistance from decreasing as income increases. Second, the HHF eliminates most of the benefits cliffs and plateaus that the family would otherwise experience. Due to the distribution of HHF assistance as benefits phase out, the family experiences continual and stable growth in net resources as their earned income increases.

Figure 5 shows that the HHF assistance decreases families' EMTRs on a $1,000 increase in income, particularly at lower income levels. With the HHF, the EMTR is lower and less volatile than without the HFF, especially as rates spike due to benefits cliffs in either

scenario. However, not all benefits cliffs are removed. For example, at an income level of $32,000, the hypothetical family faces an EMTR above 100 percent even after the HHF is introduced. The benefits cliff occurs because the family loses eligibility for subsidized school meals and experiences a gradual loss of federal and state EITC.

Figure 5: Impact of HHF on Hypothetical Family's Effective Marginal Tax Rate on $1,000 Earnings Gains, Single Adult with One Child (Aged Three)

Sources: Rules Database (Ilin and Terry 2021b) and authors' calculations.

Next, we estimate the dollar value of the HHF, which is the source of compensation for our hypothetical family following a loss of benefits. To simplify the illustration, we assume that the family does not have earned income at the program entry. This assumption demonstrates an upper-bound of the HHFs dollar value because the family's benefits are maximized when they have zero income and, therefore, the potential loss of benefits that is needed to be compensated for is the largest.

Figure 6 estimates the total HHF needed to compensate the family as its income rises from 0 to $100,000 per year, at $1,000 intervals. For example, if our hypothetical family increases earnings from $0 to $22,000 per year, the HHF provision is $10,000. Assuming the cash portion of the HHF can exceed the $10,000 limit, we find that the hypothetical family can receive up to a $26,647 HHF provision, which is enough to

compensate for the full loss of SNAP, TANF, childcare subsidy and public health insurance.

Figure 6 disaggregates the total cost of the HHF into the part which is paid out in the form of the additional rent reduction (Rent Reduction HHF) and in cash (Cash HHF). At the lower end of the income distribution the housing subsidy comprises the largest share of the program's costs. Toward the middle end of the income distribution, as SNAP and TANF start to phase out the rent reduction, HHF remains the largest cost of the program. Finally, at the upper end of the income distribution, distributing HHFs in the form of rent reductions are no longer feasible, because the value of the rent subsidy voucher can not exceed the total value of rent owed by the participants. Thus, cash payouts kick in and become a significant component of the total costs.

Figure 6: HHF Breakdown into a Rent Reduction Component and a Cash Component. Hypothetical Family: Single Adult with One Child (Aged Three)
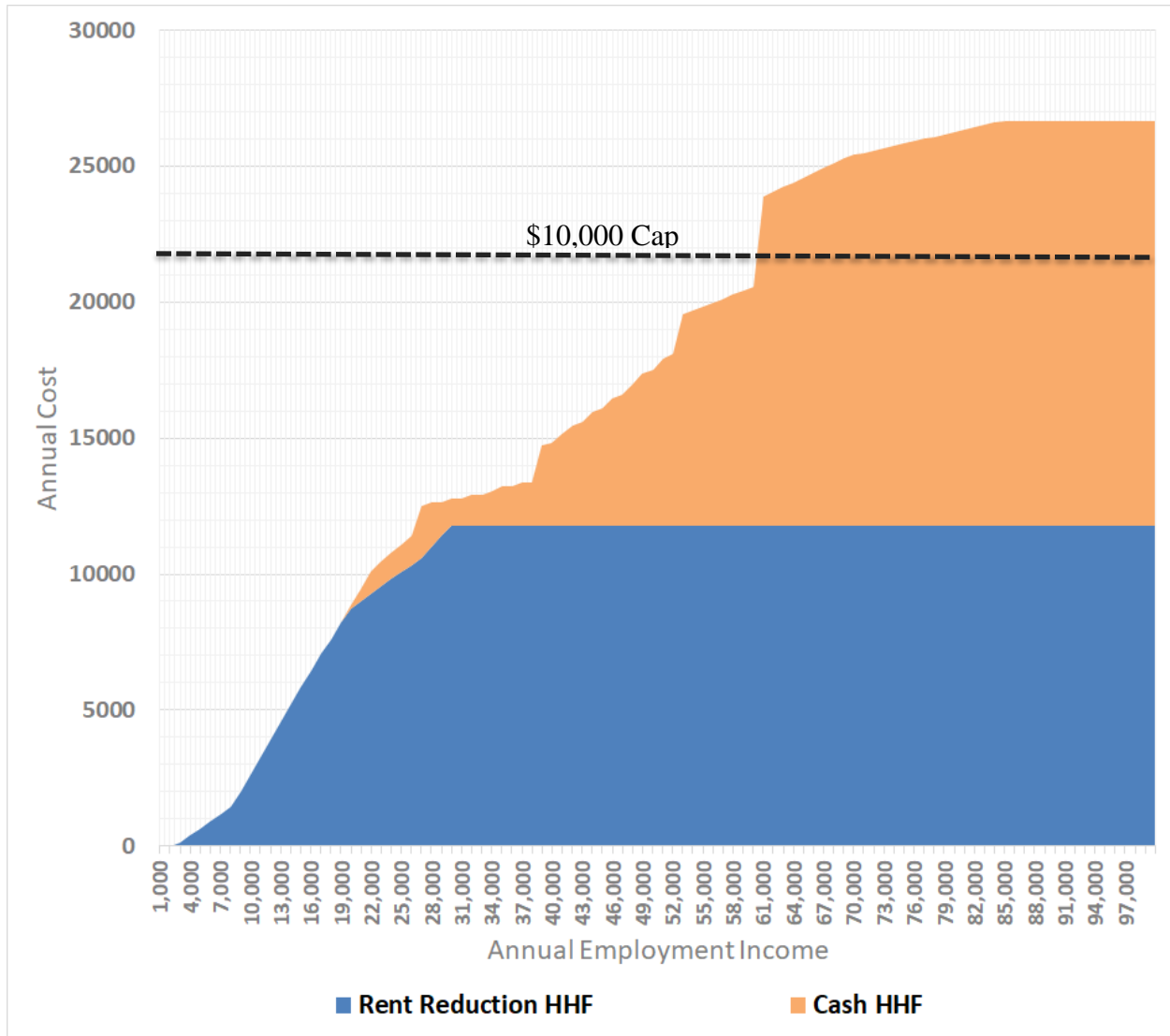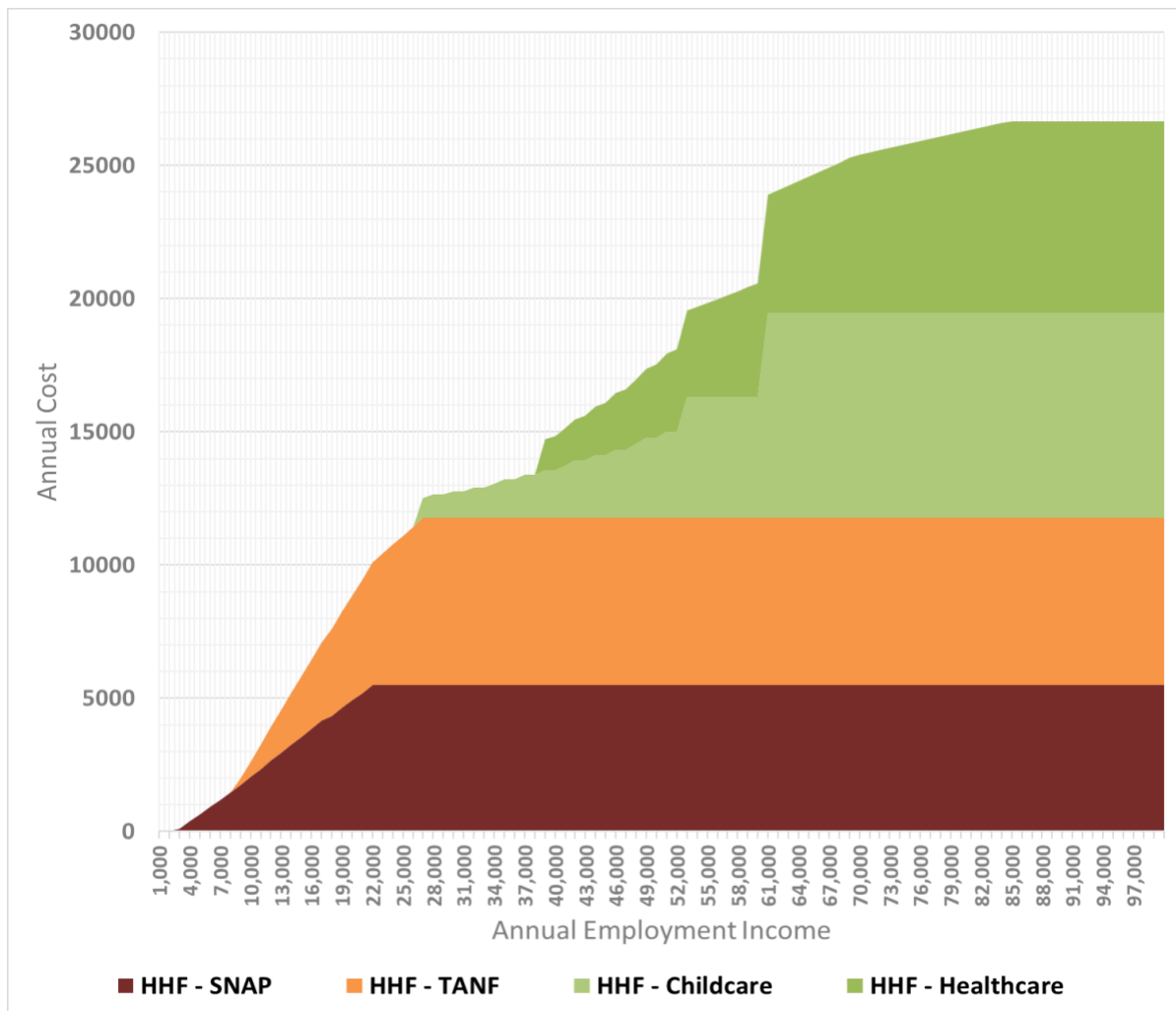

Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

Note: DC imposes a $10,000 cap on the amount of annual cash HHF payments. We model cash HHF payments above this cap to analyze the benefits cliffs mitigation strategies abstract budget constraints specific to the Career MAP program.

Finally, in figure 7 we disaggregate the total HHF payments into compensations for the loss of SNAP, TANF, childcare, and public health insurance. Participants at the lower end of the income distribution tend to only receive HHF payments for the loss of TANF and

SNAP, as they remain income eligible for these programs. At the upper end of the income distribution childcare encompasses the largest amount of the HHF payments to participants, followed by TANF and SNAP, followed by health care.

Figure 7: HHF Breakdown by Employment Income. Hypothetical Family: Single Adult with One Child (Aged Three)

Sources: Policy Rules Database (Ilin and Terry 2021b) and authors' calculations.

3.2.2 Results: Administrative Data on Career MAP Participants

In this section we use the DC DHS administrative data to analyze the extent to which an introduction of HHF reduces the EMTRs of prospective Career MAP participants. Specifically, we recreate figure 3 and show the median EMTR for all 2,512 FRSP

participants, but under a scenario in which a HHF is used to compensate for the loss of benefits.

Effect of the HHF on the Participants' EMTRs

Figure 8 shows the median EMTRs faced by all FRSP participants across a range of incomes. Similar to figure 3, we allocate all FRSP participants into bins based on their incomes relative to the FPL and calculate median EMTRs across families in each bin. EMTRs are calculated using equation 2 assuming a $5,000 increase in earnings. Figure 8 is recreated using a similar set of assumptions as in figure 3; however, we also assume that participants are given the HHFs to compensate for the loss of SNAP, TANF, childcare benefits, and health care benefits.

As shown in figure 3, without HHFs provided to participants, the median EMTR exceeds 100 percent for those with incomes between 50 and 149 percent of the FPL. Afterward, the median EMTR decreases before spiking again to 173 percent at 325 to 349 percent of the FPL. This last EMTR spike corresponds to a loss of the childcare subsidy.

When TANF, SNAP, childcare, and health care HHFs are implemented, the median EMTRs decrease for participants at all income levels. First, individuals with incomes between 50 and 150 percent of the FPL see the median EMTRs decrease from greater than 100 percent (which indicates benefits cliffs) to relatively more reasonable rates that range between 48 and 70 percent. Second, with HHFs, Career MAP participants with incomes above 150 percent of the FPL face much lower median EMTRs—for some income groups, the median EMTR was cut in half. Finally, the addition of a HHF for childcare subsidies eliminates the EMTR spike at 325 to 349 percent of the FPL and decreases the median EMTR for this group from 173 percent to 22 percent.

Figure 8: Median Effective Marginal Tax Rates at the Entry into Career MAP on a $5,000 Earnings Gain by the Federal Poverty Level. With Hold Harmless Fund Policies. All FRSP Participants
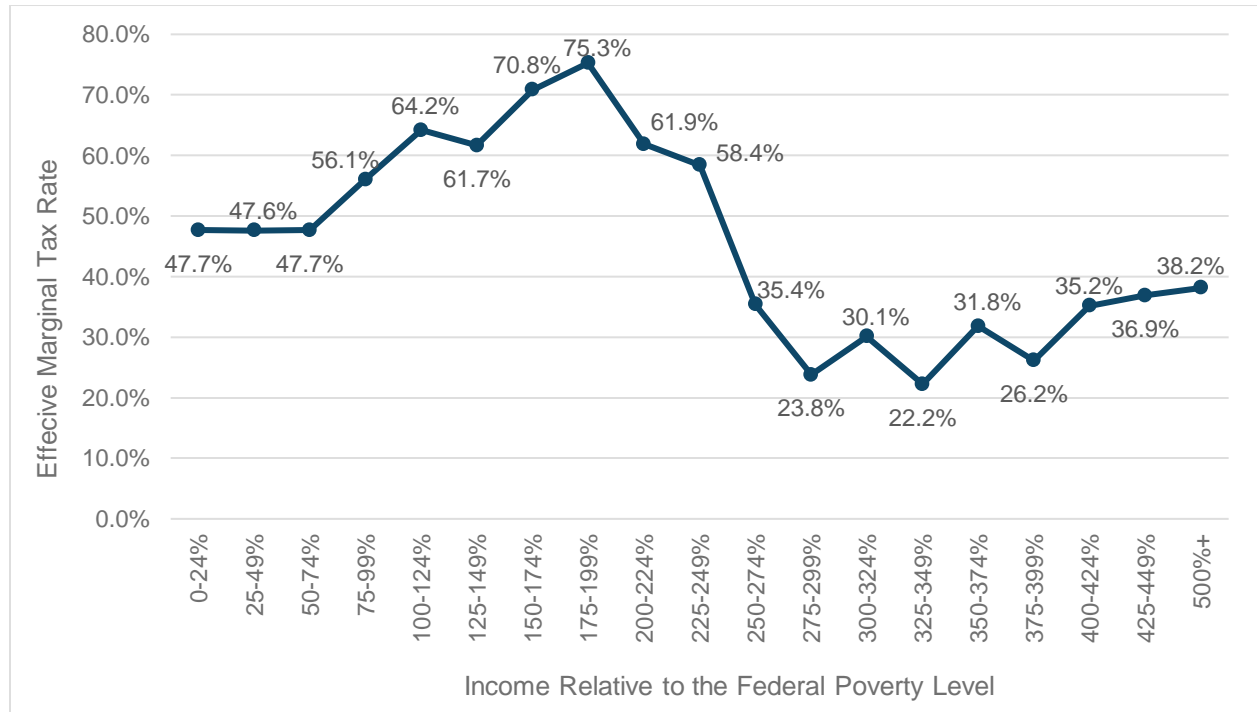
Sources: DC Department of Human Services, The Lab @ DC, and authors' calculations

Section IV: Discussion and Conclusion

Due to the structure of the US social safety net, many low- and moderate-income (LMI) families may lose thousands of dollars in public assistance when their income increases due to a raise or a promotion. These effective marginal taxes on income gains can create financial disincentives for career advancement and can place LMI workers in a position of economic instability. These disincentives can negatively impact programs that are trying to improve the economic outcomes of families, such as many workforce development programs around the country.

In this paper, we focus on the District of Columbia (DC) as a setting to study how benefits cliffs may disincentivize career advancement and impede the efficacy of local workforce programs. First, we show how the DC and federal social safety net create benefits cliffs and plateaus for a hypothetical single adult with one child. Our analysis reveals that this hypothetical family is as well off financially at $11,000 as it is at

$65,000—the family's net resources (after-tax income plus public assistance and tax credits, minus basic expenses) at both income levels are equal to $8,500. Increasing household income from $11,000 to $65,000 results in a complete or partial loss of most of the public assistance programs and tax credits that the family was originally eligible to receive. Paired with an increase in the household's tax liability, these losses fully offset the income gain of $54,000 for a similar family making $11,000. Our hypothetical example illustrates how the structure of the social safety net in DC can create disincentives for participants of employment and training programs to move into higher paying jobs to support their family. Some workers would be better off financially keeping a low-wage job, rather than seeking employment in higher-paying occupations.

A limitation of the representative family approach is that it does not produce population-level estimates and thus cannot be used to analyze the extent to which EMTRs and benefits cliffs affect all LMI families in a given population. Therefore, in the second part of the paper, we turn to the Career Mobility Action Plan (Career MAP) as an example of how benefits cliffs affect the population of low-income DC families that participate in the program. Career MAP is a pilot program funded through the American Rescue Plan Act of 2021 and administered by the DC Department of Human Services (DHS). The pilot provides direct resources for up to five years to families who have experienced homelessness and want to pursue career advancement.

First, we estimate the effective marginal tax rates that prospective Career MAP participants would face in the first year of the program. We find that families with income below 25 percent of the FPL face a median EMTR of 71.6 percent. Median EMTRs rise to above 100 percent for families with incomes between 50 and 74 percent and spike to 173 percent for those with income between 325 and 349 percent of the FPL.

Importantly, Career MAP implemented a set of program-specific strategies to directly mitigate these high EMTRs and benefits cliffs for its participants. These strategies involve providing a Hold Harmless Fund (HHF) to program participants to compensate them for the loss of cash, food, health care, childcare, and housing benefits that can occur as participants achieve new skills for job advancement and increase their incomes. As expected, our simulations suggest that replacing lost benefits through a cash and rental assistance HHF increases net resources for families and lowers EMTRs compared to a baseline scenario without aid. We find that when a HHF is used to compensate for the loss of TANF, SNAP, CCDF, and public health insurance, the median EMTR does not exceed 100 percent across all income levels. This indicates that abrupt increases in EMTRs and benefits cliffs, two major disincentives for career advancement, are eliminated by Career MAP HHF policies.

The results of our analysis can inform the design and implementation of workforce development programs that seek to mitigate the disincentives to career advancement in safety net programs. First, our analysis shows that HHF provisions for four major social safety net programs—SNAP, TANF, childcare subsidies, and public health care—considerably reduce EMTRs and keep them below 100 percent, helping families to avoid benefits cliffs. Thus, HHF provisions are indeed an effective way to at least temporarily stabilize financial resources for LMI families pursuing upward economic mobility. However, it is important to note that the loss of other benefits not covered by the HHF provisions still contributes to financial disincentives. We find that for some Career MAP families, EMTRs reach 70 percent and can still affect participants' incentives to increase earnings. It is also important to consider how the HHF payments will phase out with time. An abrupt pause or end of HHF payments to program participants might significantly destabilize families. Finally, it is not clear if mitigating benefits cliffs can go beyond stabilization to significantly improve economic mobility outcomes of families. There is no consensus in the academic literature on the extent to which benefits cliffs and high EMTRs prevent people from increasing their earnings.

Finally, the aim of this analysis was to document the existing benefits cliffs faced by families in DC, and to illustrate how HHF provisions in the DC Career MAP program mitigate these cliffs. This is a basic, but necessary step when designing benefit cliff mitigation strategies. However, before adopting a model similar to Career MAP or designing a new program, policymakers should also consider the estimated benefits and costs of the program, including the operational costs in the short-term and the longer-term costs and benefits to the workers and to the community. A full cost benefit analysis, including the predicted impact of the program on worker earnings and a comprehensive accounting of benefits and costs over a defined timeframe--was outside the scope of this analysis.

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Appendix A: Comparing Benefits Cliffs Across Family Types

Charts in this Appendix show the dollar value and composition of public benefits at different income levels for two family types—a single adult with a school-aged child (five years old), and a single adult with two children (ages three and five). For illustrative purposes we assume that each family receives all public assistance programs they are eligible for. Charts for additional family types, including a single adult with no children, can be seen on the Atlanta Fed's Policy Rules Database Dashboard.

As income increases, the value of each public assistance program changes. For some programs, the value of public assistance gradually phases out, while for others the loss is sudden. Families with children are eligible for a larger variety of public support compared to families without children, such as Medicaid for Children/CHIP, CCDF childcare subsidy, additional nutrition assistance programs (WIC), and additional tax credits (CTC, CDCTC). Moreover, income eligibility thresholds are higher for larger family sizes. For example, a family of two, loses CHIP coverage at $56,000 (see figure A1). A family of three can receive the subsidy up to $71,000 (as shown on figure A2).
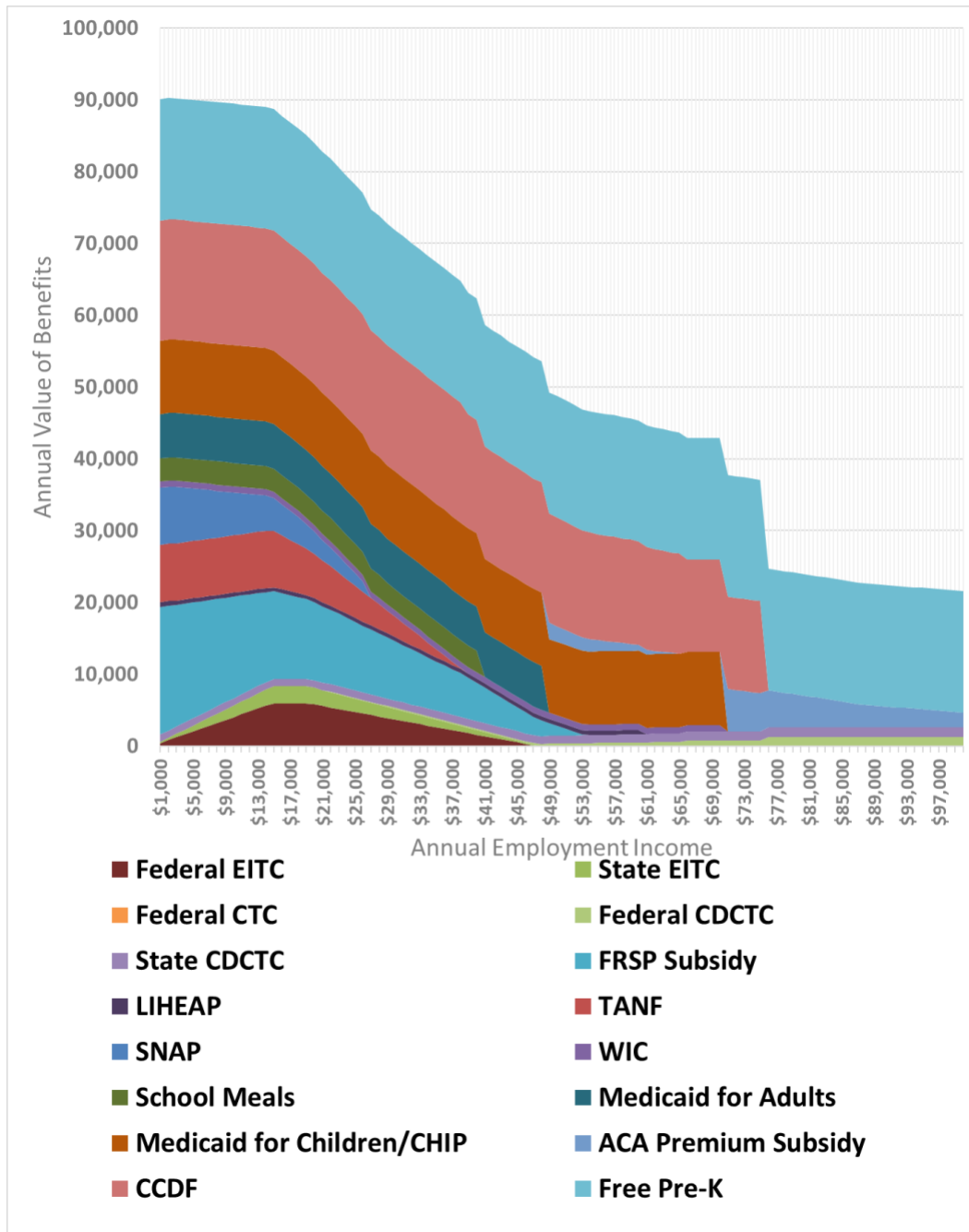
Figure A1: Value of Benefits in DC Single Adult with One Child (Aged Five)
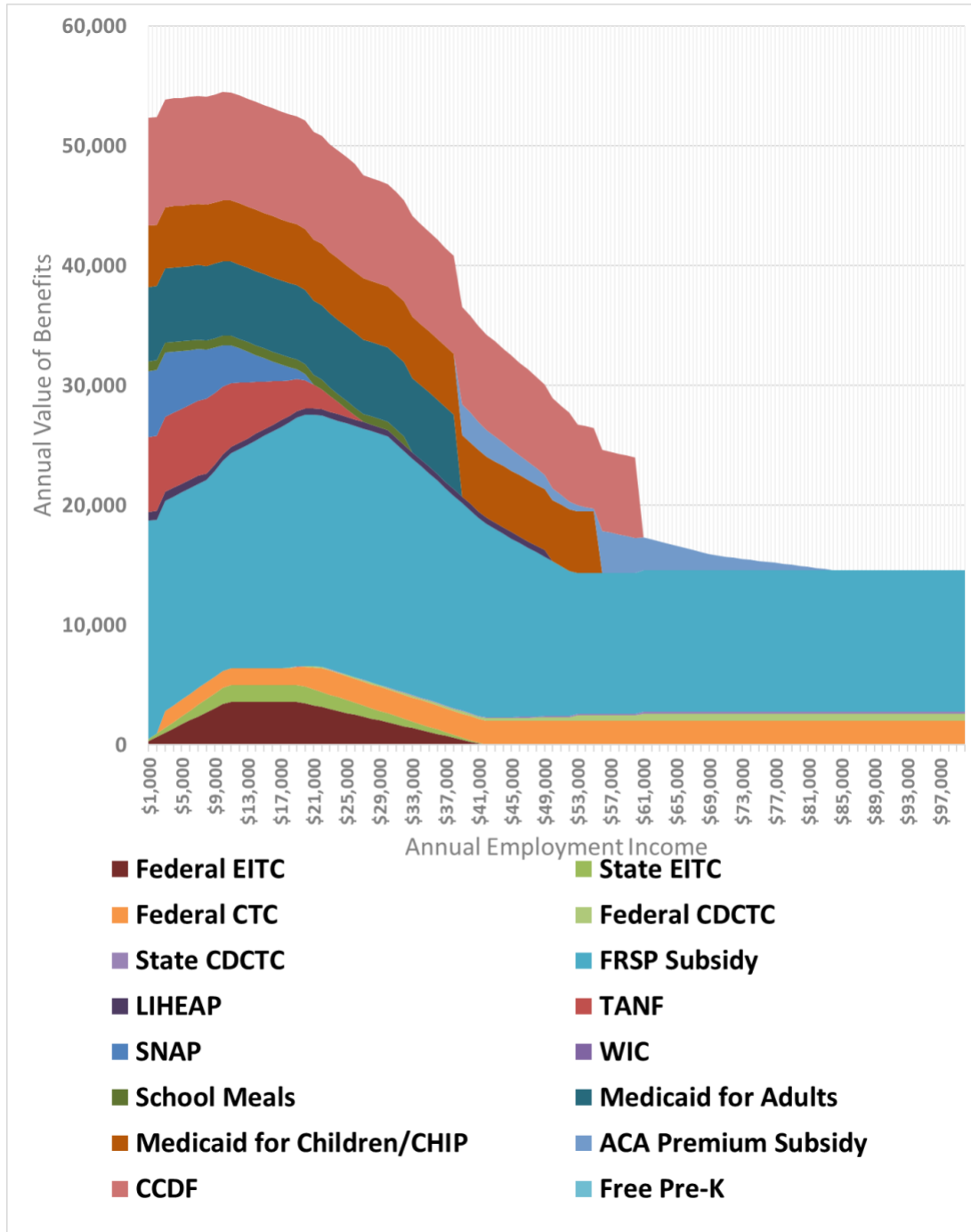
Source: Policy Rules Database Dashboard.

Figure A2: Value of Benefits in DC Single Adult with Two Children (Ages Three and Five)

Source: Policy Rules Database Dashboard.