



Economic and Policy Impact Statement: Approaches and Strategies for Providing a Minimum Income in the District of Columbia

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Economic and Policy Impact Statement

The District of Columbia's Council Rule 308 provides that the Council Budget Director may, at her discretion, prepare an economic impact analysis on permanent bills. The Council's Office of the Budget Director is adhering to this rule by preparing analyses on policy initiatives and permanent legislation that are expected to have an economic impact valued at least 0.1% of the District's gross domestic product (GDP), or \$123 million, and as staffing resources permit. The purpose of these statements is to offer Councilmembers an independent, data- and evidence-based resource for weighing the policy implications and economic costs and benefits of major pieces of legislation. These statements do not make policy recommendations, and their findings and conclusions are non-binding.

At-Large Councilmember David Grosso and Chairman Phil Mendelson raised questions during Council Period 22 about the minimum income needed to live in the District. They expressed concern about whether all residents can earn wages that are high enough to provide for their basic needs, and if the social safety net is sufficiently strong. As of July 1, 2017, the District's minimum wage is \$12.50 per hour and \$3.33 per hour for tipped workers. The "Fair Shot Minimum Wage Act of 2016" gradually increases the District's minimum wage to \$15 per hour and the tipped minimum wage to \$5 per hour by 2020.¹

Councilmember Grosso and Chairman Mendelson requested that the Office of the Budget Director address their questions by preparing a study that examines:

- 1) The level of income that households in the District would need to pay for their basic necessities absent government benefit programs;
- 2) Existing monetary and in-kind entitlements, benefits, supports, and maintenance provided by the federal and District governments to low- and moderate-income residents;
- 3) Minimum income and universal basic income pilot programs and their reported outcomes; and
- 4) Ways in which the District could define minimum income and estimate the fiscal and economic impact of implementing each alternative.

To fulfill this request and meet its responsibilities under Council Rule 308, the Office of the Budget Director has prepared this Economic and Policy Impact Statement on the feasibility of implementing a minimum income or universal basic income in the District. This study analyzes the policy implications and economic costs and benefits of a minimum income or universal basic income.

The economic and policy impact statement is not a substitute for the Office of the Chief Financial Officer's (OCFO) fiscal impact statements. The OCFO prepares fiscal impact statements on permanent bills to project the proposed legislation's impact on the District's budget and four-year financial plan.

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Executive Summary

This Economic and Policy Impact Statement examines approaches and strategies for providing a locally-funded guaranteed minimum income or universal basic income for residents of the District of Columbia (the “District”). A guaranteed basic income would not allow a resident’s income to fall below a certain threshold, whereas a universal basic income would provide a cash payment to every resident regardless of their wages or assets. This study does not analyze a specific piece of legislation; rather, it offers a framework for Councilmembers who are developing a minimum income or guaranteed basic income program. The study also forecasts the impact of a hypothetical program on the jurisdiction’s economy and labor force.

The study begins in **Section 1** by estimating the cost of living in the District and testing the strength of the public social safety net. This analysis is told through the story of three fictional households facing the real struggle of making ends meet. These invented accounts are intended to highlight some of the obstacles that people living in poverty in the District face, but this report is by no means a sociological study or an attempt to capture the full range of obstacles that families face or their experiences. The three households selected have structures that are most representative of low-income families in the District: 1) single adults without children, 2) single adults with one child, and 3) single adults with two children. The study discusses several different measures of cost of living and concludes that a single adult living in the District without children would need an hourly wage of approximately \$17.78 or an annual income of \$36,988 to meet their basic needs and pay their federal and local tax liabilities, absent public social safety net assistance. A single parent with one dependent child would need an income of roughly \$66,113 to meet their basic needs, which they could achieve by working full-time, year-round for \$31.79 per hour. A single parent with two dependent children would need an income of about \$96,885, which would mean an hourly wage of \$46.58.

Neither the federal government nor the District government offers residents a minimum income. However, each provides a wide array of social safety net programs, benefits, and tax credits to low and moderate-income households that can prevent them from falling into abject poverty. The existing social safety net is strong enough to allow a single parent living in the District with one or two children to meet their families’ needs, if they are able to access all of the public benefit programs to which they are eligible and have earned income below the Federal Poverty Level (FPL). However, if the households cannot secure one of the limited number of housing assistance vouchers available, their financial security would be in jeopardy. A household would also be particularly vulnerable if they cannot get an adequate child care subsidy, no longer meet TANF’s eligibility requirement, or they failed to file a tax return and did not collect refundable tax credits. In addition, there are far fewer resources available for non-disabled, working age adults without children. A single adult below age 65 without a disability, who was not chronically homeless, and whose earned income falls below the Federal Poverty Level would not be able to meet all of their basic needs even if they received all the public social safety net supports to which they are eligible.

Section 2 offers three methods for providing a minimum income to residents. Policymakers could choose to boost household income by providing a negative income tax, a guaranteed minimum income, or a universal basic income. However, the District would face significant hurdles in implementing this type of program without the cooperation of the federal government or neighboring jurisdictions. The

study found that using locally-raised tax dollars to guarantee a subsistence-level of income for all District households would be prohibitively expensive. Under such a program, the District government and its residents might have to forgo billions of dollars in federal funds that target low-income individuals, households, and communities. These cash transfers might also be subject to federal income taxes. However, the District could use locally-provided refundable tax credits to provide low-income workers with minimum income cash payments that would probably not be subject federal taxation or impact eligibility for needs-tested federal subsidies.

Section 3 estimates the economic consequences of providing a minimum income to District residents using a sophisticated forecasting model calibrated to the local region. This section compares the projected economic conditions under the “baseline” forecast, in which the District continues to have no minimum income program, to the projected conditions under the “policy” forecast in which the District has implemented a minimum income program. The study simulates the impact of two different mechanisms for providing a minimum income program over a ten-year period: a negative income tax and a guaranteed minimum income. It also tests different assumptions about the size of the benefit, whether the District and its residents would lose eligibility for certain federal funds, and how workers would react to a weakening of the relationship between employment and earnings. **Simulations 1** and **2** both provide a minimum income that is equal to 100% of the Federal Poverty Level, whereas **Simulations 3** and **4** offer a benefit that is worth 450% of this threshold. The model predicts that regardless of the delivery mechanism, all four scenarios would have a negative impact on the growth of the District’s GDP, total employment, and residence-adjusted employment. However, the magnitude of the impact differs between the four simulations. The model predicts that the scale of the impact is smaller in **Simulations 1** and **2** than **Simulations 3** and **4**. While the District’s GDP and the total number of jobs that the economy supports would be able to make some adjustments over time to absorb the shock of such a program, **Simulations 3** and **4** projects a significant and persistent decline in the number of jobs held by District residents.

A minimum income program could provide the District with a new, comprehensive tool to alleviate poverty in the city. Such a program would put the District at the vanguard of social safety net policy innovation. However, it would not be without risks. Minimum income is a relatively untested concept, which also means that the body of literature on their effects is thin. A minimum income program could put much of the District’s needs-tested federal funding in jeopardy if the amount of assistance it provides to low-income residents is so great that it renders households and communities ineligible for means-tested federal supports. Further, to collect enough revenue to support a significant minimum income benefit, the District would likely have to raise its tax rates and in the process become a far more expensive place for wage earners to live than surrounding jurisdictions. A significant increase in taxes in the District could lead many current and perspective residents to settle outside of the city and destabilize the local tax base.

The Budget Office recommends that Council refine its minimum income policy proposal before proceeding further with legislation. Questions that the Council might consider include: Who would receive the minimum income? What is the preferred approach to providing a minimum income? Would the minimum income supplement or supplant existing public social safety net programs?

Introduction

The District government and the federal government invest billions of dollars each year in programs that treat both the symptoms and causes of poverty. Despite decades of sustained investments, one does not have to look far to encounter individuals and families living in deep poverty. Approximately 17.9% of residents (or 112,060 individuals) have incomes below the Federal Poverty Level, which equates to an annual income below \$20,420 for a family of three (U.S. Census Bureau 2017b, U.S. Department of Health and Human Services 2017). Compared to the rest of the population, residents who live below this threshold are more likely to be young, female, non-white, and have a high school degree or less (U.S. Census Bureau 2017b).² According to a recent survey, about six in every ten Americans believe that the federal government is not doing enough to help poor people and members of the middle class (Pew Research Center 2018).

Full time employment does not guarantee economic security, and the growth of the gig economy has also given rise to a segment of the workforce with unpredictable and inconsistent employment. Raising the minimum wage is one policy tool for boosting workers' incomes, but it may not be enough for households to meet all their basic needs. As of July 1, 2017, the District's minimum wage was \$12.50 per hour and \$3.33 per hour for tipped workers, making it the highest minimum wage of any state in the country (National Conference of State Legislatures 2018). The "Fair Shot Minimum Wage Act of 2016" gradually increases the District's minimum wage to \$15 per hour and the tipped minimum wage to \$5 per hour by 2020.³ In contrast, this study estimates that a childless adult living in the District would need a minimum wage of \$17.78 or an annual income of \$36,988 to meet their basic needs, absent support from government social safety net programs.

Figure 1: Glossary of Key Terms

Universal basic income: Disburses cash benefits to all households within a defined geographic area regardless of private income or assets (Widerquist 2005).

Guaranteed minimum income: Raises households' private income to a pre-determined income threshold. This means that for each additional dollar of earnings, the minimum income cash benefit would be reduced.

Earned Income Tax Credit (EITC): This is the name of one type of negative income tax credit that the federal government provides. The District of Columbia created a local version of this tax credit. The credit is available to low- and moderate-income working individuals and families, especially those with minor children. The EITC's value varies with the tax filer's income, number of children, and marital status.

Negative income tax (NIT): Allocates refundable tax credits to tax filers whose private income falls below a pre-determined income threshold. As with guaranteed minimum income, this means that for each additional dollar of earned income, the size of a household's refundable tax credit would be lowered (Widerquist 2005).

As society grapples with the persistence of poverty, growing inequality and financial insecurity, and the erosion of the middle class, the idea of providing a universal basic income or minimum income has gained traction. A universal basic income program provides everyone in a community with a set amount of cash assistance, regardless of their earned income or assets. In contrast, a minimum income program targets cash assistance to those who earn below a pre-determined income threshold. These types of programs are held up as a way to combat inequality, abolish poverty, and redistribute wealth across the population so that everyone in society can afford their basic necessities.

Some advocates believe that such a program could ameliorate the labor market effects of automation. According to one study, 47% of jobs in the U.S. are susceptible to being replaced by automation, and jobs held by low-paid, unskilled workers are particularly vulnerable. Income guarantees could also be used to spur innovation and maximize happiness, freeing people from the daily drudgery of having to earn a living and allowing them to pursue less lucrative passions or comfortably assume the financial risk of starting a new entrepreneurial venture. Others hold up a universal basic income as a way of efficiently providing social assistance (Weissmann 2013, Johnson 2017, Ensor, et al. 2017, Frey and Osborne 2013).⁴

Income guarantee proposals have long been embraced by figures across the political spectrum from President Richard Nixon to Dr. Martin Luther King, Jr. More recently, Charles Murray, Bernie Sanders, Mark Zuckerberg, and Elon Musk have also voiced support for such a policy (C. Murray 2016, Klein 2015, Zuckerberg 2017). However, it has not been without its critics. Even decades after the idea was first proposed it remains controversial. Vice President Joe Biden, several prominent members of Congress, and the left-leaning Center for Budget and Policy Priorities have all voiced concerns about implementing such a program (Biden 2017, Byrd 2017, Greenstein 2017). The policy proposal has come under fire for three main reasons. First, it has the potential to undermine or replace existing social insurance programs that benefit low and moderate-income households. Second, a universal basic income does not necessarily target assistance for those in the greatest need, as some designs call for cash payments to be made to every resident regardless of income (Greenstein 2017). Third, providing a guaranteed, unearned paycheck has the potential to destabilize societal expectations around work, encourage able-bodied people to drop out of the labor force, and stifle economic growth (Wood 2017).

A handful of pilot programs have field-tested providing a minimum income payment. None of these programs were intended to fulfill all of households' basic needs. Instead, they were designed to supplement the household's other sources of earned income. The first experiments were conducted in the late 1960s and early 1970s in the U.S. and Canada, after which point interest in this public policy intervention waned. These pilot programs were short-term trials and are difficult to evaluate because of incomplete data collection methods. They were also limited in scope, as they only provided cash benefits to low-income households. Recently, there has been resurgence in interest in the concept of a universal basic income or a guaranteed minimum income. A second wave of experiments is now underway. In contrast to the early experiments, the current batch of pilot programs are structured as a universal basic income with varying cash guarantees and participant qualifications. The City of Stockton, California is moving ahead with an experimental universal basic program to distribute \$500 to several hundred residents each month. Hawaii is also taking steps to implement such a policy, and other states may follow suit.⁵ And in 2016, Switzerland held a public referendum on providing citizens with a universal basic income; it did not win a majority of the vote. One Silicon Valley technology firm has taken up the issue and is planning an experiment that randomly assigns 1,000 individuals from their 3,000-person participant pool to receive \$1,000 per month for three to five years (Y-Combinator

Figure 2: History of the UBI Concept

Instead of inflicting these horrible punishments, it would be far more to the point to provide everyone with some means of livelihood, so that nobody's under the frightful necessity of becoming first a thief and then a corpse.

-Sir Thomas More, Utopia

The idea for a universal basic income or minimum income may be more than five centuries old, dating back to Sir Thomas More's socio-political satire *Utopia*, which was first published in Latin in 1516. The free-market economist Milton Friedman is generally credited with developing the modern theoretical framework of a guaranteed basic income through his academic writings during the mid-20th century.

Research 2017). The idea has also been tested in Kenya, Uganda, Canada, Finland, and the Netherlands. For more information on these pilot projects, refer to **Appendix 3**.

No U.S. state, county, or city currently provides a minimum income on a permanent basis, and no country uses basic income as its principal pillar of income support for the working age population. Other forms of publicly provided universal basic income and guaranteed minimum income already exist in the United States, but they are not described in these terms. For example, the Alaska Permanent Fund pays every resident a portion of the state’s oil revenues and is therefore a type of basic income program.⁶ Programs such as Temporary Assistance for Needy Families (TANF), Social Security income, and the Earned Income Tax Credit (EITC) fill a similar role and are discussed in greater detail in **Section 1** (Patton 2017, Harkinson 2017, OECD 2017).

A wide array of social safety net programs, benefits, and tax credits offered by the District government and the federal government also help prevent low and moderate-income households from falling into abject poverty. These programs provide households with financial support, opportunities for advancement, and access to free or subsidized health insurance. Each of these benefits has its own eligibility criteria and is separately managed. Although these programs might help stabilize households, they are often plagued by suboptimal take up rates and low public awareness (Bhargava and Manoli 2015, Currie 2004). Except for Social Security Retirement Insurance and Medicare, which use age as their primary eligibility factor, social safety net programs are only available to low and moderate-income individuals and households.

Broadly speaking, the District government and the federal government provide a far more robust social safety net to families with minor children than childless, non-disabled, working age adults. Some supports are only available to households that have earned income; consequently, unemployed adults and those who have fallen out of the workforce cannot take advantage of some of the country’s largest income safety net programs. Further, many of these programs include a “marriage penalty” that is especially great for low- and moderate-income workers, meaning that a couple’s benefits would be considerably lower if they married than if they simply lived together (Acs and Maag 2005, Carasso and Steurle 2005).

Table 1: Social Safety Net Funding in District of Columbia’s FY 2017 Budget

Cost Category	FY 2017 Approved Budget
Food/Nutrition	\$98,650,028
Child Care	\$112,899,314
Medical	\$2,923,805,091
Housing	\$735,490,211
Transportation	\$23,590,865
Other	\$95,985,793
Total	\$3,990,421,302

The District of Columbia’s FY 2017 budget makes approximately \$3.9 billion of federal and local funding available for social safety net programs, including subsidies for housing, childcare, nutrition, and transportation (see **Table 1**). In addition, many low and moderate-income District households receive other federal social safety net benefits that do not appear in the District government’s budget. These are programs that do not route their cash payments or voucher disbursements through District

agencies, such as Social Security Assistance, Medicare, and Affordable Care Act health insurance premium tax credits.

To fulfill its responsibilities under Council Rule 308, the Office of the Budget Director has prepared this Economic and Policy Impact Statement on the feasibility of providing a guaranteed minimum income or universal basic income to District residents. Unlike a Fiscal Impact Statement issued by the OCFO which estimates a bill's impact on the District's budget and four year-financial plan, the Budget Office's Economic and Policy Impact Statement analyzes the policy implications and the economic costs and benefits of a particular policy proposal or legislation.

This study begins in **Section 1** by evaluating the minimum amount of money that households in the District need to meet their basic necessities versus the value of the existing social supports. **Section 2** presents three policy alternatives for providing a guaranteed income: a universal basic income, guaranteed minimum income, and a negative income tax. The study concludes in **Section 3** with an outline of the economic model's technical approach and its core assumptions, and the projected impact on the District's economy of creating a minimum income in the District through a refundable tax credit or cash payment.

1. Income Needed to Afford Basic Necessities in the District of Columbia

Section 1 estimates the cost of basic necessities in the District of Columbia relative to the public social safety net programs available, and what gaps, if any, remain that a minimum income program could fill. This analysis is told through the story of three fictional households facing the real struggle of making ends meet in the District.

- Tania Slocum is a 25-year old single woman earns a total of \$4,903 each year or 41% of the Federal Poverty Level.
- Alicia DeRussy lives alone with her two-year old son, Toby. She earns \$7,320 per year or 45% of the Federal Poverty Level for her household size.
- Ralph McNair is a single parent with two children, nine-year old Beryl and two-year old Justin. He earns \$8,820 each year or 43% of the Federal Poverty Level (Ruggles, et al. 2017, U.S. Department of Health and Human Services 2017)

These fictional accounts are intended to highlight some of the obstacles that people living in poverty in the District face, but this report is by no means a sociological study or an attempt to capture the full range of obstacles that families face or their experiences. The imaginary households share characteristics that make them easily comparable to one another. For example, in all three cases, the head of household is assumed to be 25 years old, a U.S. citizen, and in good health with no physical or mental disabilities.⁷ The authors of this report also selected these three households because they are in many ways representative of the most common household structures of those living in poverty in the District.⁸ For example, their wage and salary income is based on the 2015 American Community Survey's weighted average earnings for unmarried one, two, and three-person households in the District living below the Federal Poverty Level.⁹ Further, it would not have been feasible for this study to estimate every household's financial needs.

Table 2: Estimated Annual Cost of Living for Three Fictional D.C. Households

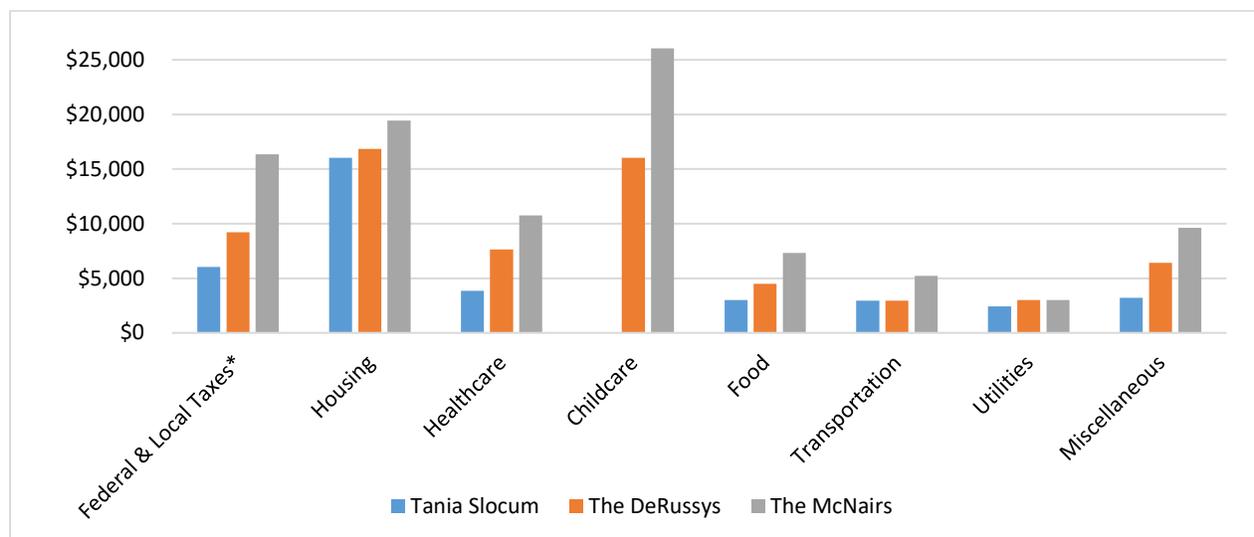
	Tania Slocum 1 Adult (25 yr)	The DeRussys 1 Adult (25 yr) & 1 Child (2 yr)	The McNairs 1 Adult (25 yr) & 2 Children (2 & 9 yrs)
Federal & Local Taxes*	\$6,038	\$9,196	\$16,345
Housing	\$16,032	\$16,848	\$19,440
Healthcare	\$3,856	\$7,648	\$10,740
Childcare	\$0	\$16,025	\$26,052
Food	\$3,005	\$4,497	\$7,313
Transportation	\$2,953	\$2,953	\$5,221
Utilities	\$2,417	\$2,996	\$2,996
Miscellaneous	\$3,204	\$6,408	\$9,612
Cost of Living, Annual	\$36,988	\$66,113	\$96,885
Equivalent Hourly Wage[†]	\$17.78	\$31.79	\$46.58

*Tax liability assuming a wage or salary income that is high enough to support basic needs. †Assuming full-time, year-round employment

This section assesses the three prototypical households’ cost of living without government supports and compares it to their earned income and the public supports available. **Section 1** discusses major expense categories in isolation, including tax liability, housing, healthcare, childcare, food, utilities, and miscellaneous expenses. The report’s authors built cost of living estimates by drawing upon four different measures of a basic income needed to survive: the Federal Poverty Level (FPL), the Supplemental Poverty Measure (SPM), the Massachusetts Institute of Technology’s Living Wage Calculator (LWC), and the Economic Policy Institute’s Family Budget Calculator (FBC). See **Appendix 1** for more information about how this estimate was developed.

This study finds that to support herself without assistance from the social safety net, Tania Slocum would need a salaried job that paid at least \$36,988 per year or a \$17.78 per hour. Alicia DeRussy would have to earn \$66,113 per year or more to meet her and her son Toby’s basic needs, which translates into a \$31.78 hourly wage. And Ralph McNair would need to make at least \$96,885 or \$46.57 per hour to support himself and his two children. **Table 2** and **Figure 3** summarize the components of these cost of living estimates, including a tax liability calculation for a wage or salary income that is high enough to meet living expenses.

Figure 3: Estimated Annual Cost of Living for Three Fictional D.C. Households



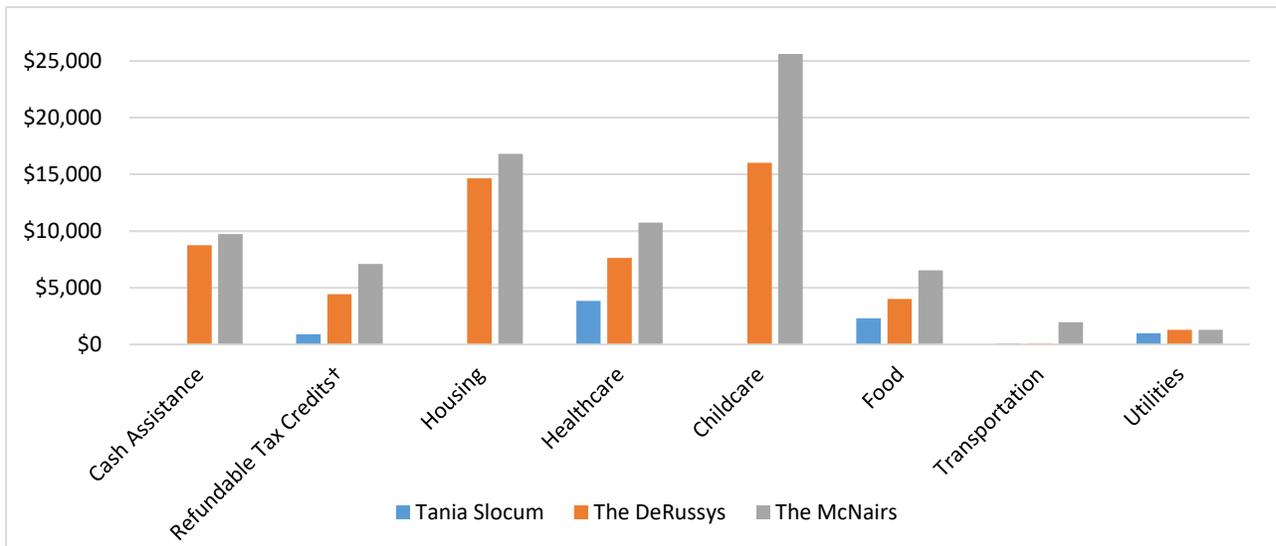
*Tax liability assuming a wage or salary income that is high enough to support basic needs.

This section also considers the full range of publicly provided income supports, tax refunds, housing assistance, subsidized childcare, nutrition programs, transportation benefits, and utilities supports that are available to the three households. It does not include the value of privately-provided supports, such as access to a food pantry operated by a nonprofit organization. The report considers a public benefit’s value to be the price that an individual that did not have access to a voucher or subsidy would have to pay to privately purchase a similar set of goods or services. For example, the report assesses the value of a child care voucher for Alicia DeRussy’s son to be the amount of money she would need to purchase this service if she did not have a voucher. The value of the public benefits available to Tania Slocum is approximately \$8,139. Alicia DeRussy and her son Toby are eligible for up to \$56,913 worth of public supports, and the full range of social safety net available to Ralph McNair and his children are valued at \$79,799 (see **Table 3** and **Figure 4**).

Table 3: Value of Social Safety Net for Three Fictional D.C. Households

	Tania Slocum 1 Adult (25 yr)	The DeRussys 1 Adult (25 yr) & 1 Child (2 yr)	The McNairs 1 Adult (25 yr) & 2 Children (2 & 9 yrs)
Cash Assistance	\$0	\$8,750	\$9,750
Refundable Tax Credits	\$897	\$4,427	\$7,100
Housing	\$0	\$14,652	\$16,794
Healthcare	\$3,856	\$7,648	\$10,740
Childcare	\$0	\$16,025	\$25,612
Food	\$2,304	\$4,028	\$6,531
Transportation	\$80	\$80	\$1,970
Utilities	\$1,002	\$1,302	\$1,302
Total Value of Public Social Safety Net	\$8,139	\$56,913	\$79,799

Figure 4: Value of Social Safety Net Benefits for Three Fictional D.C. Households



*Assuming an earned income of \$4,903 for Slocum; \$7,320 for DeRussy; and \$8,820 for McNair.

If Tania Slocum were to take advantage of every possible public benefit available to her as a childless, non-disabled, working age adult, she would still have an annual shortfall in her household budget of approximately \$18,880. There are far more public supports available to Alicia DeRussy and Ralph McNair, because they have children in their households. Consequently, the approximate value of the public supports that Alicia DeRussy and Ralph McNair would be *eligible* to receive combined with their earned income would be enough to meet their basic necessities, including their federal and state tax liability. **Table 4** and **Appendix 2** shows how the household's earned income and the full array of public benefits for which they qualify stack up against their cost of living.

Table 4: Annual Gap between Private Resources, the Public Social Safety Net, and the Cost of Living for Three Fictional D.C. Households

	Tania Slocum 1 Adult (25 yr)	The DeRussys 1 Adult (25 yr) & 1 Child (2 yr)	The McNairs 1 Adult (25 yr) & 2 Children (2 & 9 yrs)
Wage & Salary Income*	\$4,903	\$7,320	\$8,820
Value of Public Social Safety Net	\$8,139	\$56,913	\$79,799
Cost of Living [†]	\$31,842	\$57,935	\$82,049
Annual Gap in Resources[‡]	(\$18,800)	\$6,298	\$6,571

*Before taxes. [†]Including federal and state tax liability based on fictional households' earned income but excluding refundable tax credits. [‡]Positive number indicates surplus. Note: It is unlikely that a household will receive all safety net supports they are eligible to receive.

However, **simply because households are eligible for a benefit does not mean that they receive it** (see **Table 5**). For example, District residents' need for housing subsidies far outstrips the supply of public housing units and tenant-based housing vouchers (see **Section 1.3**). Only 52.7% of District households below the Federal Poverty Level receive a public housing subsidy, and 40.2% receive cash assistance, such as TANF or General Assistance for Needy Children. If the DeRussys were not able to secure a housing voucher and TANF benefits, their basic needs would outstrip their resources by \$17,104. Further, a slight change in income or family status (such as a child reaching a certain age) could render a household that had been receiving a public benefit ineligible.

Table 5: Share of D.C. Households that Actually Receive Social Safety Net Support (Select Programs)

Social Safety Net Program	Number of Households Receiving Benefit	Percent of D.C. Households
TANF or local cash assistance	15,669	5.7%
Federal EITC*, [‡]	51,000	14.8%
Local EITC*, [‡]	58,493	17.0%
Public Housing or HCVP/LRSP Voucher	20,536	7.4%
Public Health Insurance Subsidies ^{†,‡}	277,533	39.6%
SNAP voucher [‡]	74,126	26.8%
LIHEAP [‡]	21,000	5.7%

*Number of tax filers, not households. [†]Number of individuals, not households. [‡]This benefit is available to households who have incomes below, at, and above the Federal Poverty Level.

1.1. Cash-Based Assistance

The only federal or District programs that provide cash benefits to low income households are the joint federal-state Temporary Assistance for Needy Families (TANF) program and the locally-funded Program on Work Employment and Responsibility (POWER) and General Assistance for Children.¹⁰ These three programs have similar eligibility criteria and are only available to households with minor children. The cash assistance that they offer may help stabilize families, but it is not enough to raise families' incomes to the federal poverty threshold.¹¹ Further, many households who earn less than the Federal Poverty Level may still make too much money to qualify for TANF.¹² Approximately 14,918 households (39,490

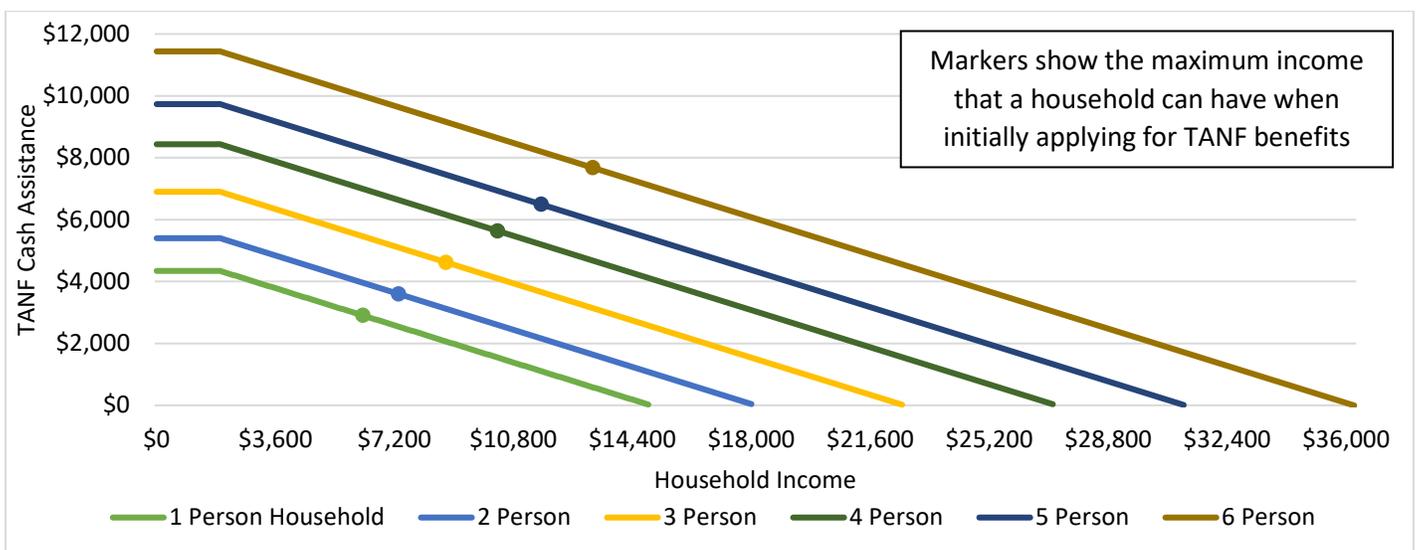
individuals) in the District receive TANF cash assistance each month; 564 households are enrolled in POWER; and 187 households receive General Assistance for Children (217 individuals) (D.C. Department of Human Services 2017). The District budgeted approximately \$58.6 million in cash assistance for these three programs in FY 2017, including \$12.92 million of federal grant funds and \$45.7 million of local funds.

Table 6: Cash Assistance Available to Three Fictional D.C. Households, Annual

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
TANF Cash Assistance	\$0	\$3,600	\$4,600
TANF Employment Bonus	\$0	\$1,250	\$1,250
TANF Travel Subsidy	\$0	\$3,900	\$3,900
TOTAL	\$0	\$8,750	\$9,750

To be eligible for TANF cash assistance, applicants must be extremely low income and have children below age 18. Households with more children qualify for a larger cash benefit, and the cash benefit declines as the household’s earned income rises (see **Figure 5**). The federal government supports TANF through a block grant, and states have great discretion over their TANF programs. The fictional Tania Slocum would not qualify for TANF because she does not have a child, but as extremely low-income parents, Alicia DeRussy and Ralph McNair would be eligible for this benefit. If they meet TANF’s work participation requirements and their wage or salary income remains stable, Alicia DeRussy could receive up to \$3,600 in TANF cash assistance benefits each year, and Ralph McNair could get up to \$4,600 in benefits. However, if Alicia or Ralph’s earned income rises, their TANF benefits would taper off. Alicia would lose all her TANF benefits if she earned \$18,120 or more per year, while Ralph would be cut off from TANF if his earned income exceeded \$22,620. Both fictional households would also have to forfeit their benefits if they had more than \$2,000 in savings; they lost custody of their children; or if their youngest child turned 18 years old.

Figure 5: Annual TANF Cash Assistance by Household Income & Size (unsanctioned, ≤60 months)



In addition to their baseline TANF cash assistance, Alicia and Ralph could qualify for two other forms of TANF cash benefits. First, if Alicia and Ralph can maintain the same job for six months or longer, they would qualify for TANF bonuses, which together are valued at up to \$1,250 (D.C. Department of Human Services 2017b). Second, Alicia and Ralph could receive a weekly stipend of \$75 to assist with transportation if they are actively engaged with their TANF Employment Program provider. This stipend is provided on a pre-loaded debit card, and participants can use it for transportation as well as non-transportation-related expenses (D.C. Department of Human Services 2017, 2018). **Table 6** summarizes the forms of cash assistance that are available to the three fictional households adjusted for their earned income.

However, it may not be realistic to assume that Alicia and Ralph are able to secure or maintain steady employment. In 2015, only 20.8% of adult TANF recipients in the District were employed, and just 1.8% of people in poverty in the District worked full-time, year-round. Further, people in service occupations have shorter job tenure than other major occupations that tend to be higher paying, such as professional services or management. Sixty-six percent of adult TANF recipients in the District did not complete high school, and the average job tenure for workers with such a low level of educational attainment is shorter than for those that have completed more years of schooling (U.S. Bureau of Labor Statistics 2014, 2017, U.S. Department of Health and Human Services 2016, U.S. Census Bureau 2017b).¹³

1.2. Tax Liability and Refundable Tax Credits

There are two ways to estimate the three prototypical families' Federal Insurance Contributions Act (FICA) and income tax liability if they take standard deductions.¹⁴ The first approach (Scenario A) considers how much Tania Slocum, Alicia DeRussy, and Ralph McNair would have to pay in taxes if they earned enough money to provide for their families' basic needs without government support. If this were the case, the three fictional household heads would be subject to FICA taxes as well as federal and District personal income taxes. After subtracting for refundable and non-refundable tax credits, in 2018 Tania would owe \$5,521 in FICA and federal and local income taxes; Alicia would need to pay \$8,738; and Ralph would have a \$15,511 tax liability. **Table 7** summarizes the components of their tax bills.

Table 7: Tax Liability of Three Fictional D.C. Households

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
Scenario A: Earned income enough to afford basic necessities before taxes			
FICA Withholding	\$2,407	\$4,389	\$6,225
Federal Income Tax	\$2,146	\$4,602	\$9,499
D.C. Income Tax	\$968	\$1,747	\$3,787
Tax Credits	\$0	(\$2,000)	(\$4,000)
Total Tax Liability*	\$5,521	\$8,738	\$15,511
Scenario B: Earned income equal to the weighted average earnings of residents below Federal Poverty Level			
FICA Withholding	\$375	\$560	\$675
Federal Income Tax	\$0	\$0	\$0
D.C. Income Tax	\$0	\$0	\$0
Refundable Tax Credits	(\$897)	(\$4,428)	(\$7,100)
Total Tax Liability*	(\$522)	(\$3,867)	(\$6,425)

*Positive number indicates the amount that households owe in taxes. A negative number indicates how much they would get in refunds.

Due to the passage of the federal “Tax Cuts and Jobs Act of 2017,” under Scenario A the three fictional households owe less in taxes in 2018 than they would have in 2017. The new law doubles the Child Tax Credit and the standard deduction while lowering individual tax rates. However, these tax benefits are set to expire in 2026. During the law’s first year, Tania Slocum’s tax bill would be lowered from her 2017 liability by approximately \$823; Alicia DeRussy would owe \$1,197 less; and Ralph McNair’s tax bill would be reduced by \$2,136

The second method (Scenario B) estimates the three fictional households’ tax liability based on their actual wage and salary earnings. If the three households have annual incomes below the Federal Poverty Level, they would be responsible for paying a FICA tax but not federal or state personal income taxes. The reason for this is that all wages up to a ceiling are subject to FICA withholdings, but wages below certain earnings thresholds are not subject to federal or District personal income taxes. The Tax Policy Center estimated that between 2011 and 2016, 83% of federal taxpayers had to pay FICA taxes whereas 56% owed federal income taxes (Williams 2016). Based on their earnings, Tania Slocum would owe \$375 in FICA taxes; Alicia DeRussy would owe \$560; and Ralph McNair would have to pay \$675 (see **Table 7**).¹⁵ The “Tax Cuts and Jobs Act of 2017” would not impact the three fictional households’ income tax liability under Scenario B, but it would increase the value of their Child Tax Credit.

Poverty prevention efforts can be implemented through the tax code using a progressive tax structure or tax expenditures. A progressive tax structure means that lower-income people are taxed at a lower rate than higher income people. The D.C. Tax Revision Commission issued a set of recommendations in 2014 to make the District’s tax code more progressive, and the District has phased in these policy changes as revenues have allowed (D.C. Fiscal Policy Institute 2014, Rueben 2014, D.C. Tax Revision Commission 2014). Tax expenditures reduce the amount of money the government collects in revenues by providing deductions, exclusions, credits, deferrals, or preferential rates to certain groups of taxpayers. Since tax expenditures bear a closer resemblance to a minimum income program than progressive tax rates, this report focuses on the former (see **Appendix 4**).

Refundable income taxes, one type of tax expenditure, are an important tool for stabilizing many low-income households’ finances. There are three different refundable income taxes available to low-income District residents: The Earned Income Tax Credit (EITC), the Child Tax Credit (CTC), and the District’s Schedule H. By filing their taxes, Tania Slocum will receive \$897 in refundable tax credits from the federal and District governments; Alicia DeRussy will get \$4,428; and Ralph McNair will qualify for \$7,100 (see **Table 8**).

Table 8: Refundable Tax Credits of Three Fictional D.C. Households

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
Wage & Salary Income	\$4,903	\$7,320	\$8,820
Refundable Tax Credits			
EITC: federal	\$375	\$2,489	\$3,528
EITC: local	\$375	\$996	\$1,411
Child Tax Credit	\$0	\$723	\$1,896
Schedule H	\$147	\$220	\$265
Total Refund*	\$897	\$4,429	\$7,100

* Not inclusive of FICA tax liability.

The EITC is responsible for providing income support to millions of American families living in poverty and at its cusp (Marr, Huang and Sherman, et al. 2015). For instance, a team of researchers who assessed the District’s EITC concluded that the combined federal and local EITC “raises the likelihood of net-EITC income above poverty and near poverty by as much as 9%, with the largest consistent effects accruing to single-parent families” (Hardy, Muhammad and Samudra 2015). Approximately 51,000 District residents were awarded an average of \$2,336 in federal EITC in 2017, receiving a combined \$120 million (Internal Revenue Service 2017a). In tax year 2013, 58,493 tax filers claimed the District’s locally-funded EITC (D.C. Office of the Chief Financial Officer 2016). The District government expects to forgo \$66.543 million in tax revenue in FY 2017 because of this credit, making the local EITC by far the jurisdiction’s largest income tax expenditure (D.C. Office of the Chief Financial Officer 2016).

The EITC is one of the largest anti-poverty programs in the U.S. It originated in federal tax law, but the District of Columbia and 25 other states have also created their own, state-funded EITCs (Hathaway 2017). The EITC was designed to benefit the working poor and incentivize labor force participation. In fact, the EITC has been found to increase employment among single mothers without distorting the existing workforce’s labor supply (Elissa and Hoynes 2008). The value of an EITC refund tracks a tax filer’s earnings and does not have any sharp cliffs. The EITC rises as earnings grow, then plateaus, and gradually tapers off to zero as earnings reach the income ceiling. All three of the fictional households would qualify for the federal and local EITC’s, with the value of their tax credit varying by their earned income and household size. Tania Slocum would qualify for \$375 in federal EITC and \$375 in local EITC; Alicia DeRussy would receive \$2,489 in federal EITC and \$996 in local EITC; and Ralph McNair would get \$3,528 in federal EITC and \$1,411 in local EITC.

Despite the lower tax bill and potential cash infusion that the EITC offers to low- and moderate-income households, it is an underutilized benefit. The IRS reports that 20% of U.S. households eligible for the federal EITC do not claim it, and eligible households in the District were on average less likely to file for EITC benefits than households located elsewhere in the region.¹⁶ In the District, 28.1% of eligible households did not make use of the tax credit in 2014, compared with 22.4% of eligible Maryland households and 19.5% of eligible Virginia households (Internal Revenue Service 2017). The typical EITC non-claimant forgoes the equivalent of 33 days of income (Bhargava and Manoli 2015). Not only does this mean that about one in four eligible households in the District are losing out on this important income boost, it also means that families living on the edge forgo a substantial cash influx. If the District raised federal EITC participation to 100% of eligible households, approximately 19,900 more households in the jurisdiction would benefit from a total of \$46.65 million more in refundable federal tax credits.¹⁷

Figure 6: History of EITC

The EITC is one of the rare tax policies that continues to garner bipartisan support, having been shown to be effective at encouraging work, reducing poverty, and producing long-lasting positive effects on outcomes for low- and moderate-income families and children (Murray and Kneebone 2017). The EITC has its origins in early minimum income debates and a policy proposal called the negative income tax, of which economist Milton Friedman was an early champion (Friedman 2013). The tax credit proposal gained traction during President Nixon’s minimum income pilot program and was signed into law by his successor, President Ford, in 1975. President Reagan described the EITC as “the best anti-poverty, the best pro-family, the best job creation measure to come out of Congress,” and his administration was responsible for substantially expanding the EITC by indexing its income ceiling and phase-out levels to inflation. Since then, Congress has also acted to make the tax credit more generous (Hungerford and Thiess 2013).

Studies have shown that eligible households who are Latino, foreign born, or live in the Northeast are less likely to claim the federal EITC than other eligible households (Ross Phillips 2001, Caputo 2006).

In addition to the EITC, the federal government offers a partially-refundable credit open to parents or guardians of minor children called the Child Tax Credit (CTC).¹⁸ In 2018 the credit is worth up to \$2,000 per child, of which \$1,400 is partially refundable. Tania Slocum would not qualify for the CTC, because she does not have a child. However, the refundable portion of Alicia DeRussy’s CTC would be worth \$723. With his higher earned income and two children, Ralph McNair would receive \$1,896 from the CTC (Tax Policy Center 2017). The U.S. Treasury Department expects to make \$29.98 billion in CTC outlays during 2017 (U.S. Department of the Treasury 2017).¹⁹

Since 1977, the District has offered a property tax circuit breaker program that is commonly referred to as “Schedule H.”²⁰ It applies a property tax credit to low-income homeowners and renters’ income tax liability. The credit enhances the income security of residents who have high property tax or rent relative to their income. Tax filers must have income below \$50,000 to qualify, and the maximum credit is approximately \$1,000 (adjusted annually for inflation). During the 2015 tax year, 21,457 District tax filers claimed the credit, with each filer receiving an average of \$795 (D.C. Office of the Chief Financial Officer 2018). The District government expects to forgo \$16.373 million in tax revenue in FY 2017 due to the Schedule H tax credit (D.C. Office of the Chief Financial Officer 2016). This report’s three fictional households would be eligible for the Schedule H. Tania Slocum could expect to receive \$147 in refundable Schedule H credits; Alicia DeRussy would get \$220; and Ralph McNair’s credit would be \$265.²¹

1.3. Housing Costs and Supports

Housing is a major cost driver in households’ budgets, which is especially true in the District of Columbia, which has one of the most expensive housing markets in the country. The most common housing problem faced by District families is that the price exceeds what they can afford to pay. Approximately one in every four renters in the District are severely cost burdened (Tatian, et al. 2015). The federal and District government address this problem by operating many different housing support programs that assist low-income households.

Table 9: Monthly Fair Market Rents (FMRs), FY 2017

	Efficiency	One-Bedroom	Two-Bedroom	Three-Bedroom	Four-Bedroom
Washington-Arlington-Alexandria, DC-VA-MD HUD Metropolitan FMR Area	\$1,336	\$1,404	\$1,620	\$2,134	\$2,649

This study uses the U.S. Department of Housing and Urban Development’s (HUD) Fair Market Rent (FMR) measure for the Washington, D.C. metropolitan area to estimate housing costs for the sample households. The FMR is an estimate of the average rental price of standard quality properties of various sizes within a certain geographic area, and it is the basis for determining the value of tenant-based rental assistance programs such as Housing Choice Vouchers, also known as Section 8.²² The FMR in Washington, D.C. is the 50th percentile of gross rent that recent movers in a local housing market pay for standard-quality rental units, as shown in **Table 9**.²³ The gross rent includes the cost for rent plus the cost of all tenant-paid utilities except telephone, cable, and internet service (U.S. Department of

Housing and Urban Development 2007). The District's FMR area encompasses surrounding jurisdictions within the commuting radius. The FBC and LWC both calculate housing costs through HUD's FMR valuations. However, the FMR has at times been criticized for underestimating the costs of affordable housing or for not taking into account the large variations in market rent that often exist between neighborhoods (U.S. Government Accountability Office 2005, Fischer 2015).

Public housing subsidies for low-income households fall into two broad categories. First, there are traditional public housing developments. These are government-owned properties in which tenants' rental payments are capped at 30% of their adjusted income. On average, public housing tenants in the District owe \$250 per month (D.C. Housing Authority 2017a). The District of Columbia Housing Authority (DCHA) maintains more than 8,000 units across 56 public housing developments, providing housing for over 20,000 District residents (D.C. Housing Authority 2018a).²⁴ However, the federal government's chronic underfunding of public housing capital and operating expenses has placed public housing inventories at risk of further deterioration (D.C. Housing Authority 2017).

Second, there are housing subsidy programs that operate through public-private partnerships. The federally-funded Housing Choice Voucher Program (HCVP) provides housing assistance to very low-income households through the private market. As of February 2017, the DCHA administered approximately 11,434 HCVP tenant-based vouchers, which were worth an average of \$1,100 per month (D.C. Housing Authority 2017a, 2017). HCVP participants are responsible for finding a suitable housing unit, and the DCHA pays the housing subsidy directly to the landlord. Vouchers are typically valued at the metropolitan area's FMR payment standard for the given unit size minus 30% of the participant's monthly adjusted gross income. However, the DCHA has a waiver to allow a neighborhood-based rental payment standard up to a maximum of 175% of FMR to be used instead. Tenants must pay the difference between the value of their HCVP subsidy and the actual rent charged by the landlord.²⁵ The DCHA also administers two other HCVP subsidies: Project-based and Moderate Rehabilitation programs, which aid specific, privately-managed units.

In addition, the District provides housing assistance to extremely low-income households (with incomes up to 30% of area median income) through the Local Rent Supplement Program (LRSP). This locally-funded rental subsidy is modeled after HCVP. As of February 2017, the District funded 1,102 tenant-based LRSP vouchers, of which 70% were used to rent housing units in Wards 7 and 8. In addition, LRSP provides project- and sponsor-based housing subsidies that are tied to units rather than tenants. In other words, this government subsidy allows for the creation of privately-owned housing for extremely low-income households. The District funded 158 project-based and 822 sponsor-based LRSP units as of February 2017 (D.C. Housing Authority 2017).

The District has taken many other steps to help make affordable housing available. These efforts include the Housing Production Trust Fund (HPTF), Inclusionary Zoning (IZ) program, the Tenant Opportunity to Purchase Act (TOPA), the District Opportunity to Purchase Act (DOPA), a range of housing supports through homeless services, and the Schedule H refundable tax credit (see **Section 1.2**). The District also leverages other federal low-income housing funding opportunities, such as the Community Development Block Grant program, the HOME Investment Partnerships program, the Housing Opportunities for Persons with AIDS (HOPWA) program, the National Housing Trust Fund, the Emergency Solutions Grant (ESG) program, and the Low Income Housing Tax Credit (LIHTC) program (Office of the District of Columbia Auditor 2017).

Table 10: Housing Costs & Subsidies for Three Fictional D.C. Households

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
Unit Size	Efficiency	1 bedroom	2 bedrooms
Fair Market Rent (Monthly)	\$1,336	\$1,404	\$1,620
HCVF Subsidy	\$0	\$1,221	\$1,400
Unmet Housing Costs			
Monthly	\$1,336	\$183	\$221
Annually	\$16,032	\$2,196	\$2,646

This study’s three fictional households pay fair market rents for their modest dwellings. Tania Slocum would rent a studio apartment in the District that costs \$1,336 per month; Alicia DeRussy and her son would live in a one-bedroom apartment that costs \$1,404 per month; and Ralph McNair and his two children would lease a two-bedroom apartment that costs \$1,620 per month (U.S. Department of Housing and Urban Development 2017). Assuming that Alicia and Ralph would qualify for and receive HCVF tenant-based vouchers, the former’s monthly HCVF rental subsidy would be \$1,221, and the latter’s would be \$1,400. Even after receiving the voucher, Alicia and Ralph would still be responsible for paying for a portion of their rent, as shown in **Table 10**. They could also use their HCVF voucher to pay for their utilities, as discussed in **Section 1.8**.

However, Tania Slocum would not be able to receive a housing subsidy. As a single, non-disabled, non-elderly, not chronically homeless adult without children, she would not be eligible for any of the preferences given to applicants in the current system (D.C. Housing Authority 2018). It may be technically possible for her to secure an affordable housing unit through the IZ program, but her income is too low for her to be able to keep up with her rent (D.C. Department of Housing and Community Development 2017).²⁶

While this report endeavors to show the full range of public assistance programs available to the three fictional households, it may not be reasonable to assume the DeRussys and the McNairs would secure a housing subsidy. Many households that meet a housing subsidy’s income eligibility requirement do not receive the benefit. Unlike means-tested entitlements, such as SNAP, satisfying a housing program’s technical eligibility requirements does not guarantee that an applicant will receive assistance. For example, only 23% of families in the District on TANF received housing support during FY 2015 although they all have incomes that are low enough to qualify them for HCVF or LRSP vouchers (U.S. Department of Health and Human Services 2016).

The DCHA serves approximately 50,000 individuals, but tens of thousands more households are on its waiting list (D.C. Housing Authority 2017a, Office of the District of Columbia Auditor 2017).²⁷ The District has funded new housing subsidy slots each year, but the creation of new units has not kept pace with demand. The District also prioritizes housing vouchers to those who are experiencing homelessness. Further, there is a shortage of affordable units in the District’s housing stock, meaning that even residents who receive housing subsidies often have trouble securing a unit that they can afford (Tatian, et al. 2015, Zippel 2016).

1.4. Healthcare Costs and Supports

Health insurance coverage is vital for wellbeing, and it can also have a significant impact on a household's budget. Having health insurance or using more medical care has been shown to improve the health of uninsured people as well as increase their work effort and boost their annual earnings (Hadley 2003, Freeman, et al. 2008). In 2016, the District boasted the highest rate of health insurance coverage of any state (The Henry J. Kaiser Family Foundation 2018).²⁸

To estimate the cost of unsubsidized health insurance coverage, this study applies the price tag of the least expensive bronze-level health insurance plan available on the D.C. Health Link for the three fictional households in 2018.²⁹ Bronze plans have the lowest insurance premiums, but patients are typically responsible for paying 40% of their medical costs. Assuming that these three households are in good health and would not require any significant medical procedures or expensive maintenance prescription medication, the D.C. Health Link online navigation tool estimates that annual premiums for a bronze-level plan and out-of-pocket costs to be \$3,856 for Tania Slocum; \$7,648 for Alicia DeRussy and her son; and \$10,740 for Ralph McNair and his two children (DC Health Link 2017).³⁰

Healthcare spending makes up the largest share of the District's public welfare operating budget, accounting for approximately 73% of these investments. Most of the District's healthcare spending is on Medicaid, which is a jointly funded, federal-state program that provides health insurance to qualifying low-income families and individuals. In FY 2016, the District incurred approximately \$2.8 billion in Medicaid expenditures, including approximately \$800 million in local funds.³¹

District residents with adjusted annual incomes up to 324% of the Federal Poverty Level (including the 5% income disregard) can qualify for Medicaid benefits, which would mean an annual adjusted gross income for a four-person household of \$79,704 or less.³² Other low-income residents who are ineligible for Medicaid or Medicare, such as recent or undocumented immigrants, can enroll in a similar, fully subsidized, locally funded health insurance program called the D.C. Health Care Alliance. In FY 2016, about 261,768 District residents each month had free health insurance through Medicaid, and another 15,000 were covered by the D.C. Health Care Alliance (D.C. Department of Health Care Finance 2016a).

The federal government also subsidizes health insurance for people with moderate incomes through the Advanced Premium Tax Credit (APTC). Those who qualify for the tax credit do not have employer-provided health insurance. These households earn too much money to be eligible for Medicaid, but it would be unaffordable for them to purchase unsubsidized health insurance. Only 785 District residents received this subsidy as of February 2017, by far the fewest number of any state. The average monthly award was \$247, making for an estimated total annual APTC award to District residents of \$2.329 million (The Henry J. Kaiser Family Foundation 2018a).

1.5. Childcare Costs and Assistance

High quality childcare can have long term effects on children's cognitive development and making this service affordable allows parents or guardians to stay in the workforce (Peisner-Feinberg, et al. 2001, Burchinal, et al. 1996, Connelly 1992). However, the District boasts the highest childcare costs of any state in the country. In fact, average child care costs in the District eclipse the next most expensive state, New Jersey, by 39%. Child Care Aware of America estimated that in 2016, the District's average annual cost of full-time, center-based childcare for a pre-school aged child was \$17,863, whereas family childcare homes cost \$13,684.³³

Applying the price estimates developed by Child Care Aware, the unsubsidized cost of full-time care for Alicia DeRussy and Ralph McNair’s two-year old children would be approximately \$16,025. Ralph McNair would need to pay an additional \$8,467 each year to send his nine year old daughter Beryl to afterschool care and \$1,040 for eight weeks of D.C. Department of Parks and Recreation (DPR) summer camp (D.C. Department of Parks and Recreation 2017a).^{34,35} DPR does not offer day camps for children younger than age three, so neither Toby DeRussy nor Justin McNair could enroll. Since Tania Slocum does not have any children, she would not have any childcare costs.

The federal and District governments provide low-income families several forms of childcare assistance. These subsidies are worth a total of \$16,025 per year to Alicia DeRussy and \$25,612 to Ralph McNair.³⁶ As shown in **Table 11**, Alicia DeRussy’s childcare expenses could be fully covered through government social safety net programs, whereas Ralph McNair would need to pay approximately \$440 out of pocket per year.

Given their incomes and their children’s age, Alicia DeRussy and Ralph McNair would qualify for free childcare through the Child Care Subsidy Program. Since they have incomes below 50% of the Federal Poverty Level, neither Alicia nor Ralph would be responsible for any co-payments (D.C. Office of the State Superintendent of Education 2010). In 2015, approximately 7,400 District children received Child Care Subsidy vouchers each month (D.C. Office of the State Superintendent of Education 2016). When their children turn three years old, they could enroll in the District’s free, high-quality, full-day, universal pre-kindergarten program. In FY 2017, approximately 78% of three and four-year old children in the District were enrolled in a public pre-K program or 13,166 students (D.C. Office of the State Superintendent of Education 2017).

Table 11: Childcare Expenses of Three Fictional D.C. Households

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child (2 yr)	The McNairs 1 Adult & 2 Children (2 & 9 yrs)
Cost of Child Care			
Family Child Care Home, Full-Time	\$0	\$16,025	\$16,025
Afterschool Care	\$0	\$0	\$8,467
Summer care	\$0	\$0	\$1,040
Total	\$0	\$16,025	\$26,052
Value of Child Care Supports			
Childcare voucher	\$0	\$16,025	\$16,025
Afterschool program	\$0	\$0	\$8,467
DPR Discounted Summer Camp	\$0	\$0	\$600
Total	\$0	\$16,025	\$25,612
Unmet Childcare Expenses	\$0	\$0	\$440

Based on the household’s income, Ralph McNair’s older child would qualify for a 75% discount for summer camp offered through DPR. This discount applies to the camp registration fee but does not

apply to the fees for before or after care and field trips (D.C. Department of Parks and Recreation 2017). The rate reduction would save Ralph McNair \$600 per year. Ralph McNair’s older daughter, Beryl, could also get free after school care through the DPR’s Afternoon Access program.

1.6. Food Costs and Supports

Obesity and diabetes rates are highest in the United States among low-income Americans, which many researchers have linked to disparities in access to healthy foods. The healthful diets recommended by nutritionists tend to be based around whole grains, fresh produce, and lean meats. However, energy-dense grains, fats, and sugars are the lowest-cost dietary options available to consumers (Drewnowski and Darmon 2005, Monsivais and Drewnowski 2007, Townsend, et al. 2009). These disparities may also be exacerbated by the built environment of low-income neighborhoods, such as difficulty accessing grocery stores (Mobley, et al. 2006, Jetter and Cassady 2006). About 11% of the District is considered a food desert, meaning that residents in these areas cannot easily travel to a grocery store or supermarket. Food deserts in the District include the neighborhoods of Historic Anacostia, Barry Farms, Mayfair, and Ivy City (Smith 2017).³⁷

This study uses the U.S. Department of Agriculture (USDA)’s Low-Cost Food Plan to develop the three fictional families’ budgets for preparing nutritious meals and snacks at home.³⁸ As shown in **Table 12**, Tania Slocum is expected to spend \$3,005 per year on food prepared at home, whereas Alicia DeRussy is predicted to pay \$4,497 to feed herself and her son Toby, and Ralph McNair is estimated to budget \$7,313 a year to feeding himself and his two children. Even after receiving publicly provided nutritional assistance, Tania Slocum would have to spend approximately \$701 each year for food, Alicia DeRussy would have to pay \$469, and Ralph McNair would spend \$782.

Table 12: Annual Food Costs of Three Fictional D.C. Households

	Tania Slocum 1 Adult (25 yr)	The DeRussys 1 Adult (25 yr) & 1 Child (2 yr)	The McNairs 1 Adult (25 yr) & 2 Children (2 & 9 yrs)
Food Costs*			
USDA Low-Cost Food Plan	\$3,005	\$4,497	\$7,313
Food Supports			
SNAP	\$2,304	\$2,736	\$4,416
WIC	\$0	\$576	\$576
WIC Cash Value Check	\$0	\$150	\$150
Free School & Child Care Meals; Summer Food Program	\$0	\$566	\$1,389
Total	\$2,304	\$4,028	\$6,531
Unmet Food Costs	\$701	\$469	\$782

*The USDA recommends applying a 20% upward adjustment for a one-person household, a 10% upward adjustment for a two-person household, or a 5% upward adjustment for a three-person household.

The federal and District governments offer an array of nutritional supports to low-income individuals and families. The largest of these programs is the Supplemental Nutrition Assistance Program (SNAP),

which is colloquially known as food stamps. SNAP customers receive a monthly food stipend loaded onto a prepaid debit card.³⁹ Based on their income, household size, and monthly expenditures, Tania Slocum, Alicia DeRussy, and Ralph McNair would all be eligible for SNAP benefits. Tania Slocum would qualify for about \$2,304 per year in SNAP benefits, whereas Alicia DeRussy would be eligible for approximately \$2,736 in SNAP vouchers, and Ralph McNair could qualify for roughly \$4,416 (U.S. Department of Agriculture 2018).⁴⁰ Federal law prohibits adults between the ages of 18 and 49 who are not disabled and have no dependents from receiving SNAP benefits for more than three months over the course of three years unless they meet certain work requirements (U.S. Department of Agriculture 2017c). As of 2018, the District of Columbia is one of nine states or territories that have the authority to fully waive these time limits (U.S. Department of Agriculture 2017f). Approximately 74,126 households or 125,855 individuals in the District receive SNAP benefits each year (D.C. Department of Human Services 2017).⁴¹ The program is funded by the U.S. Department of Agriculture and administered by the states.

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides additional nutritional supports to low-income new and expectant mothers and children up to age five. Alicia DeRussy's two-year-old son and Ralph McNair's younger child would qualify for this benefit. Unlike SNAP, the WIC program does not offer a cash-based benefit. Rather, it defines an assortment of nutritionally-rich foods that recipients can use a WIC voucher to purchase at participating grocery stores. For example, the D.C. Department of Health currently allows WIC vouchers to cover the purchase of one loaf of bread per month so long as it is 100% whole wheat, not organic, and sold under an approved brand by a qualifying store. The District does not allow WIC benefits to be used to purchase multigrain bread or loaves containing nuts or sweeteners (D.C. Department of Health 2016). Approximately 13,164 District residents receive WIC benefits with an average monthly benefit of \$48 (D.C. Department of Health 2018).

The DeRussys and McNairs would also qualify for a \$150 per year supplemental produce allowance through the WIC Cash Value Checks (CVC) program. These vouchers can be spent to buy fresh fruits, vegetables, and herbs at local farmers' markets. Since both the DeRussys and the McNairs have a child under age five, they would be eligible for a monthly benefit of \$25.00 per during the farmers' market season, from June to November (D.C. Department of Health 2018a).

While school is in session, students under age 18 from low-income households can also qualify for free breakfasts and lunches through the School Breakfast Program, the National School Lunch Program, the Summer Meals Program, and the Special Milk Program for Children. Students from households with incomes less than 135% of the Federal Poverty Level are eligible for free school meals, whereas meal charges are reduced for students from households with incomes between 136% and 185% of the Federal Poverty Level (U.S. Department of Agriculture 2017). During the summer months, subsidized breakfast and lunch are also available to children from families of limited financial means thanks to the D.C. Free Summer Meals Program. D.C. Public Schools (DCPS) reported that 48,555 of its students received 9,799,764 free or reduced school meals during the 2016 to 2017 school year. Approximately 78% of DCPS and DCPCS (DC Public Charter School Students) students have family incomes that would qualify them for free or reduced school lunch, which is about 70,000 students (D.C. Public Schools 2018, D.C. Public Charter School Board 2018).

The U.S. Department of Agriculture reimburses the District government up to \$3.46 per lunch for school age children, but DCPS pays significantly more for food services than the federal reimbursement rate and more than comparable systems (U.S. Department of Agriculture 2017a, Office of the District of Columbia Auditor 2016). If Beryl McNair receives free breakfasts and lunches during the school year and over the summer, the value of these benefits would total approximately \$823.⁴²

Subsidized meals are also available to young children from low-income families who are enrolled in qualifying childcare or Head Start through the Child and Adult Care Food Program, as would be the case for Toby DeRussy and Justin McNair. These subsidized meals would be worth approximately \$566 to the DeRussy and McNairs household budgets.

1.7. Transportation Costs and Subsidies

This report assumes that Tania Slocum, Alicia DeRussy and her son, and Ralph McNair and his two children would use several different modes of public transportation and vehicle sharing services to get around town.⁴³ Without public subsidies, Tania Slocum and Alicia DeRussy are both expected to need about \$2,953 per year for transportation expenses, while Ralph McNair is predicted to spend \$5,221 on transportation for himself and his two children.⁴⁴ If the three fictional households took advantage of every public transportation subsidy for which they qualify, they would still have out-of-pocket transportation expenses. Tania Slocum would need to budget \$2,873 for transportation, Alicia DeRussy would need \$2,873, and Ralph McNair would spend \$3,251.

This study assumes that the three families would regularly use public transportation. A monthly unsubsidized Washington Metropolitan Area Transit Authority (WMATA) SelectPass rail and bus pass at a \$3.75 ride level costs \$189 (Washington Metropolitan Area Transit Authority 2017). Tania Slocum and Alicia DeRussy would both need to purchase a SelectPass at an annual cost of \$2,268. Ralph McNair would have to buy two SelectPasses, one for himself and one for his nine-year-old daughter Beryl, at an annual price of \$4,536. At two years old, and Toby DeRussy and Justin McNair would ride WMATA's metro and bus system for free.

To ensure broad access to transportation, the study includes memberships to Capital Bikeshare (\$85 per household member) and Zipcar (\$600 per household assuming six hours of driving per month) in its transportation cost estimate (Capital Bikeshare 2017, Zipcar 2017). The study assumes that Toby DeRussy and Beryl and Justin McNair would all be too young to ride a bicycle on city streets and would therefore not need their own Capital Bikeshare memberships.

The District provides a range of transportation subsidies that would benefit Tania Slocum, Alicia DeRussy, and Ralph McNair, as shown in **Table 13**. These subsidies are worth a total of \$80 per year for Tania Slocum and the DeRussys and \$1,970 to the McNairs.

Through the "Kids Ride Free" program, D.C. Public and Charter Schools students can receive free metro and bus rides within the District for travel to and from school and for school-related events. Private school students can qualify for free bus service and can purchase a \$30 monthly Metrorail pass. This report assumes that the fictional Beryl McNair is a DCPS student would get free transit through this program during the school year. This subsidy is worth approximately \$1,890 to the McNairs. Still, Ralph McNair would have to pay an estimated \$378 for his daughter's public transit fees during the summer months and approximately \$50 for any rides she takes outside of the District during the school year. If

Beryl instead attended a private or a parochial school, she could get a D.C. Student Unlimited Monthly Pass for \$30 (Washington Metropolitan Area Transit Authority 2018). Children under age five do not have to pay WMATA fares, meaning that at two years old, Toby DeRussy and Justin McNair would not be charged a fare.

Table 13: Annual Transportation Costs of Three Fictional D.C. Households

	Tania Slocum 1 Adult (25 yr)	The DeRussys 1 Adult (25 yr) & 1 Child (2 yr)	The McNairs 1 Adult (25 yr) & 2 Children (2 & 9 yrs)
Transportation Costs			
WMATA passes	\$2,268	\$2,268	\$4,536
Capital Bikeshare	\$85	\$85	\$85
Zipcar	\$600	\$600	\$600
Total	\$2,953	\$2,953	\$5,221
Transportation Supports			
“Kids Ride Free”	\$0	\$0	\$1,890
Capital Bikeshare Discount	\$80	\$80	\$80
Total	\$80	\$80	\$1,970
Unmet Transportation Costs	\$2,873	\$2,873	\$3,251

Students enrolled in adult learning programs through the Office of the State Superintendent (OSSE) can qualify for a monthly \$50 transit subsidy under the “Adult Learners Transit Subsidy Amendment Act of 2017.”⁴⁵ However, OSSE’s adult learning programs are geared towards helping students acquire high school diplomas or GED’s later in life. Since Tania Slocum, Alicia DeRussy, and Ralph McNair already hold high school degrees, none of them would be enrolled in an OSSE program that offers a transportation subsidy. Alicia DeRussy and Ralph McNair would also qualify for transportation subsidies through the TANF program. Since these benefits are flexible and can be spent like cash, rather than a voucher for a specific good, it is discussed in **Section 1.1** alongside other cash assistance programs rather than in the transportation subsidy section.

As Medicaid recipients, all three families would be eligible for an \$80 discount on an annual Capital Bikeshare membership (Capital Bikeshare 2017a). Car sharing services, such as ZipCar do not offer discounts to low-income individuals or households.⁴⁶

1.8. Utilities Costs and Subsidies

Estimating the cost of utilities depends on a number of assumptions. First, this analysis assumes that Tania Slocum, the DeRussys, and the McNairs live in rental apartments in which the tenant pays for their unit’s electric and gas bills.⁴⁷ It also assumes that the three fictional families use cellular rather than landline telephones and have broadband Internet in their homes. Based on these assumptions, Tania Slocum’s annual utility costs are expected to total \$2,417; and Alicia DeRussy and Ralph McNair’s utility expenses are each estimated to be \$2,996 each year.⁴⁸ After receiving various subsidies and discounts,

Tania Slocum’s out-of-pocket utility costs would be about \$1,415 per year; whereas Alicia DeRussy and Ralph McNair are each expected to pay roughly \$1,694 (see **Table 14**).

There are several different utility subsidies that are available to low-income households in the District. Tania Slocum would qualify for a different set of utility assistance programs than Alicia DeRussy and Ralph McNair. The reason for this difference is that Tania Slocum does not have a HCVP voucher that caps the portion of her income that she can spend on rent and utilities, whereas the others do.

Table 14: Estimated Annual Utility Costs and Subsidies

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
Utility Costs			
Electricity	\$600	\$900	\$900
Natural gas	\$180	\$180	\$180
Cellular phone	\$837	\$1,116	\$1,116
Broadband Internet	\$800	\$800	\$800
Total	\$2,417	\$2,996	\$2,996
Utility Subsidies			
LIHEAP - heating/cooling	\$600	\$0	\$0
Residential Aid Discount- electricity	\$180	\$0	\$0
Lifeline Program - telephone & broadband	\$222	\$222	\$222
HCVP Voucher	\$0	\$1,080	\$1,080
Total	\$1,002	\$1,302	\$1,302
Unmet Utilities Need	\$1,415	\$1,694	\$1,694

Tania Slocum could receive support for home energy costs through the joint federally and locally-funded Low-Income Home Energy Assistance Program (LIHEAP). Based on her income, household size, and the assumption that she lives in a multifamily building in which electricity and heat are not included in her rent, Tania Slocum would be eligible for an annual LIHEAP benefit of approximately \$600. All three households could qualify for emergency LIHEAP assistance if one of their utilities was cut off due to unpaid bills and needed to be restored. Roughly 21,000 District residents received a LIHEAP award in FY 2017 (excluding the “Heat and Eat” participants), and the District’s program had a budget of \$19.67 million in federal and local funding that year (D.C. Department of Energy and Environment 2017).

Tania Slocum could also receive subsidies through the Utility Discount Program. She could qualify for an approximately \$180 annual discount on her electric bills through the Residential Aid Discount (RAD) Program offered by Pepco and a reduction on the distribution portion of her gas bill through Washington Gas’s Residential Essential Service (RES) Program (Public Service Commission of the District of Columbia 2018).⁴⁹ As of 2016, the RAD Program had 17,769 participants, and the RES Program had 7,155 enrollees (Public Service Commission of the District of Columbia 2017, D.C. Department of Energy and the Environment 2018). If Tania lived in a unit that charged for water and sewer separately, she could receive subsidies valued at approximately \$450 per year from the D.C. Department of Energy and

Environment’s Customer Assistance Program (CAP) (DC Water 2017, D.C. Department of Energy and the Environment 2018).

Alicia DeRussy and Ralph McNair would have their electricity and gas bills subsidized through their HCVP voucher, which are discussed in greater detail in **Section 1.3**. As HCVP voucher holders, Alicia and Ralph could not spend more than 30% of their adjusted income on rent and utilities. Consequently, the two households would have the value of their annual HCVP benefit adjusted upwards by approximately \$1,080 to cover the cost of their electric and gas bills.⁵⁰

Given their incomes, Tania Slocum, Alicia DeRussy, and Ralph McNair would all qualify for a discount for their telephone and broadband services through the federal Lifeline Program. This program provides up to a \$9.25 monthly discount to low-income individuals for wired or wireless telephone services and \$9.25 per month towards broadband services. To be eligible, one must have an income below 135% of the Federal Poverty Level or receive certain types of needs-tested assistance, such as SNAP. Only one discount is provided per household. The Federal Communications Commission (FCC) budgeted \$2.279 billion for the Lifeline Program in 2018 (Federal Communications Commission 2018). According to one source, about 52,000 households in the District subscribed to the federal Lifeline Program in 2015, which included just 43% of those eligible (Universal Service Administrative Co. 2016). The District also has a locally-funded Lifeline program that can only be used for wired telephone service by residents who qualify for but do not receive federal Lifeline benefits. The local program charges participants \$3 per month for landline telephone service, with a discounted \$1 per month rate for senior citizens (D.C. Lifeline 2018, D.C. Department of Energy and the Environment 2018a). The Public Service Commission reported that fewer than 750 households subscribe to the local program (D.C. Department of Energy and the Environment 2018a).

1.9. Miscellaneous Expenses

In addition to the major cost categories already discussed in this section, there are a myriad of other purchases that households need to make over the course of the year. This report estimates that the annual spending on these miscellaneous expenses would be \$3,204 for Tania Slocum, \$6,408 for Alicia DeRussy, and \$9,612 for Ralph McNair (see **Table 15**).

Table 15: Estimated Miscellaneous Expenses for Three Fictional D.C. Households

	Tania Slocum 1 Adult	The DeRussys 1 Adult & 1 Child	The McNairs 1 Adult & 2 Children
Apparel and services	\$1,062	\$2,123	\$3,184
Housekeeping supplies	\$278	\$555	\$832
Personal care products & services	\$365	\$731	\$1,097
Reading	\$103	\$207	\$310
Education	\$844	\$1,688	\$2,532
Miscellaneous	\$552	\$1,104	\$1,657
Total	\$3,204	\$6,408	\$9,612

These estimates are derived from six of the U.S. Bureau of Labor Statistic's Consumer Expenditure Survey's spending categories. These categories are apparel and services; housekeeping supplies; personal care products and services; reading; education; and miscellaneous expenses.⁵¹ The study uses the estimates for Washington, D.C. adjusted for household size and inflation (U.S. Bureau of Labor Statistics 2017d, 2017a).⁵²

2. Potential Policy Options for Providing a Minimum Income

Section 2 outlines three possible approaches for providing a minimum income in the District of Columbia: a negative income tax, a guaranteed minimum income, and a universal basic income (see **Figure 1** for definitions of these key terms). These policy options offer the possibility of significant rewards, but they also carry risks. While each of the three policies would have a different structure, they share many of the same potential advantages and disadvantages.

In terms of advantages, these programs have the potential to eliminate poverty in the District and its accompanying social ills. They might grow the economic base by giving entrepreneurs the financial security needed to pursue a new venture. The economy might also expand from increased household spending among those at the bottom end of the economic ladder, who are more likely than wealthier households to use additional earnings for consumption rather than saving (Nikiforos, Steinbaum and Zezza 2017). Such a program has the potential to provide parents and caregivers the opportunity to reduce their work hours or quit their jobs to spend more time with their child or ailing relative. It might increase the prevailing wage or improve working conditions by strengthening employees' bargaining positions (OECD 2017). Providing some form of a minimum income payment could also reduce the need for other social insurance programs and costly interventions that often treat the symptoms rather than the root causes of poverty. Further, a cash transfer program is generally less expensive to administer than in-kind benefits.

Table 16: Federal Funds for Social Safety Net Programs in D.C. Gvt's FY2016 Operating Budget

Federally-Funded Public Benefit	FY16 Federal Grants
Medicaid	\$2,035,326,138
Supplemental Nutrition Assistance Program (SNAP)	\$225,333,286
Temporary Assistance for Needy Families (TANF)	\$172,404,715
Title I School Funding	\$45,881,592
Free and Reduced School Meals	\$39,875,600
Housing and Urban Development (HUD)	\$37,847,434
D.C. School Choice	\$32,579,571
Child Care	\$20,346,329
Head Start	\$14,396,245
Women, Infant, and Children (WIC)	\$13,492,836
Low-Income Home Energy Assistance Program (LIHEAP)	\$10,447,479
Total	\$2,647,931,225

However, these policy options share four potential risks to the District. First, the program's cash transfer payments may be subject to federal income taxes. Consequently, the impact of such a program would be weakened, and it would result in a massive transfer of locally raised tax dollars to the federal government in the form of a higher federal income tax liability. Second, raising individuals' and households' incomes through a cash transfer payment may render them ineligible for needs-tested benefit programs and decrease funding opportunities for important District services. Federal programs such as Title I educational grants and Medicaid payments bring billions of dollars of federal resources to the District each year (see **Table 16**). The FY 2016 operating budget included at least \$2.65 billion in

federal payments and grants for programs that target low income residents and communities. Forgoing these benefits would create a significant hole in the District’s budget, and the cash transfer provided under a minimum income plan may not be great enough to make up for the households’ loss of in-kind benefits. Such a reduction in federal resources would also eliminate a significant amount of activity from the local economy.⁵³ It would be difficult for the District to go it alone with a minimum income program except if the federal government allowed states to turn social safety net programs into block grants.

Third, all three of the policy options are expensive, and unless the District found ways to increase revenues, it would likely result in reductions in other government services or higher tax rates levied on a contracting resident labor force. Fourth, such a program could destabilize the District’s tax base. Since the jurisdiction’s borders are highly porous and no other government in the U.S. offers such a significant cash transfer, it is possible that such a program would precipitate significant in-migration of people wishing to enroll in the program combined with significant out-migration of existing residents who are unwilling to assume the substantially higher tax liability that may be necessary to fund it. While some studies show that large differences in state income tax rates can impact people’s decisions on where to live, the question is by no means settled (Coomes and Hoyt 2007, Bakija and Slemrod 2004). Other researchers have found that tax rates have a weak impact on cross-state and cross-county migration, especially among high earners (Thompson 2011, Young, Varner and Lurie 2016, Varner and Young 2012, Liebig, Puhani and Sousa-Poza 2007).

2.1. Minimum Income Refundable Tax Credit

The first approach to providing a minimum income would be expanding an existing type of income support: the negative income tax. The District’s existing negative income tax, the local EITC, could be modified to provide the desired minimum income benefit or a new refundable tax credit could be created. A minimum income refundable tax credit offers four key advantages.

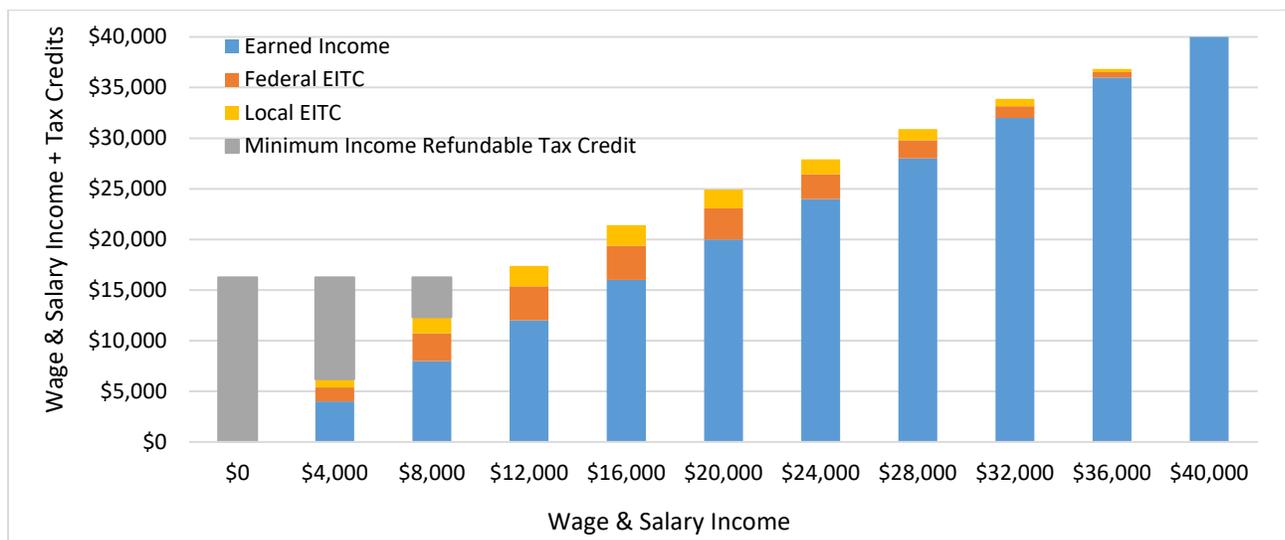
First, it is the least expensive of the three options, because it would provide payments only to low-income wage earners, and it would not require a new government bureaucracy for managing the program. Second, it would be less likely to jeopardize the District government and its residents’ eligibility for federal grants that target low-income individuals, since EITC refunds are not generally included in federal income eligibility formulas.

Third, household income obtained through a local refundable tax credit would probably not be subject to federal income taxes unless a filer itemizes their deductions. This would affect a relatively small share of low-income residents, since only 5% of filers in the District with incomes below the federal poverty currently itemize their tax deductions, and that number is likely to fall due to the “Tax Cuts and Jobs Act of 2017” (D.C. Office of the Chief Financial Officer 2017). Fourth, a negative income tax program could be built into the District’s existing tax and revenues systems. It would have the advantage of requiring less capital investment to start up and lower ongoing administrative expenses than the guaranteed minimum income and the universal basic income programs, which are discussed in **Sections 2.2** and **2.3**, respectively.

This subsection discusses three possible options for delivering minimum income benefits through the tax code. “*Refundable Tax Credit Policy Option A*”— would be to create a minimum income tax credit that raised all households’ income to 100% of the Federal Poverty Level, which would be an annual income of \$20,420 for a three-person household (U.S. Department of Health and Human Services 2017). Households without any wage or salary income would be eligible, and the largest tax refunds would go to the households with the least income. Both households with children and single childless adults who earned below the Federal Poverty Level would receive a refundable tax credit. Option A would enrich

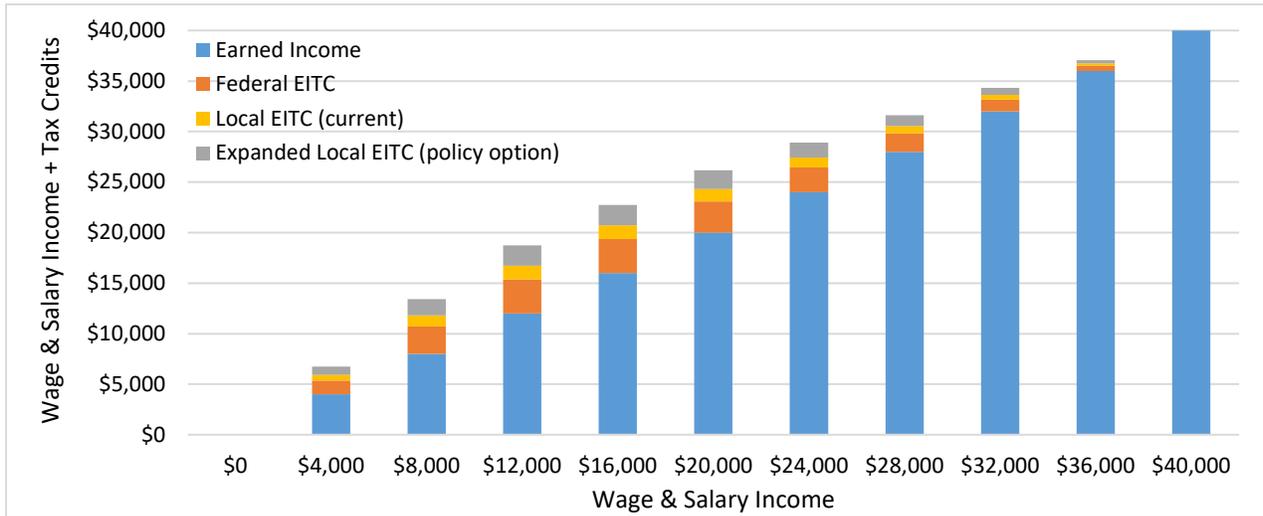
the value of refundable tax credits for low-income households and expand the eligibility pool. While it would provide benefits to the most vulnerable households, it risks distorting or undermining the EITC’s work incentives (see **Section 1.2**). **Figure 7** Error! Reference source not found. shows what this tax credit would be worth to households with one child and a wage and salary income below \$40,000. A household with \$0 in earned income would get a tax credit worth \$16,240, whereas a household with \$8,000 in salary and wage income would receive a \$3,901 credit. After considering earnings and the value of other refundable tax credits, both of these households would have the same \$16,240 in resources. Implementing Option A would require a significant investment of resources. The Budget Office estimates that it would result in between \$300 million and \$1 billion in foregone local tax revenues each year. While this is an expensive program, it would not have to be created all at once. Such a policy could be phased in as revenues allow, much as the reforms recommended by the Tax Revision Commission have been implemented. **Section 3.2.1** forecasts this option’s labor market and economic impacts.

Figure 7: Refundable Tax Credit Policy Option A: Establish an Income Floor at 100% of Federal Poverty Level (Household with One Child)



A second option— “*Refundable Tax Credit Option B*”— would modify the existing local EITC program to increase the amount of tax credit provided to households with children. Currently the District’s local EITC provides a 100% match to the federal EITC for childless adults but a 40% match for households with children (for more information see **Section 1.2** and **Appendix 4**). Under Option B, the District would raise its federal EITC match for households with children from 40% to 100%. For instance, a household with \$0 in wage and salary income would not get a tax credit (under the existing local EITC program only households with earned income are eligible), and a household with \$8,000 in income would get an additional \$1,627 in refundable tax credits, raising their annual cash resources to \$13,424. Given the EITC’s structure, Option B would provide the greatest benefit to those with incomes between \$9,900 and \$18,199, but it would not boost the incomes of the lowest earners or the long-term unemployed. Option B would only enhance the value of the EITC refundable tax credit for low and moderate-income households with children. It is unlikely to undermine the EITC’s work incentives, and it would not increase the pool of eligible households. **Figure 8** Error! Reference source not found. shows how this policy would alter the resources available to a household with one child and an income below \$40,000.

Figure 8: Refundable Tax Credit Policy Option B: Expand Local EITC to Provide 100% Federal Match for Households with Children (Household with One Child)



A third option— “Refundable Tax Credit Policy Option C”—would be to modify other components of the local EITC’s structure and eligibility standards. This option could be used to make more tax filers eligible for the EITC and enhance the benefit. As earnings rise, the maximum tax credit could be phased in more rapidly. Likewise, the benefit could be phased out more slowly for moderate income tax filers. Additional income level brackets could be added. Policymakers could choose to lower the age of eligibility or increase the refundable tax credit.

This third proposal mirrors recent bipartisan efforts at the federal level. In 2016, both President Obama and House Speaker Paul Ryan put forth nearly identical proposals to lower the eligibility age for childless adults from 25 to 21, raise the maximum credit from \$506 to approximately \$1,000, and double the phase-in and phase out rates (Holtz-Eakin, Gitis and Arndt 2016). Under such a plan, about 24,000 District workers would become eligible for an EITC or receive a larger credit; among them, an estimated 6,000 workers in the District between the ages of 21 and 24 (Center on Budget and Policy Priorities 2016).

2.2. Guaranteed Minimum Income

A second approach would be to establish a guaranteed minimum income. Policymakers would set an income floor, promising that all residents have at least the specified amount of cash available to them each year through a combination of earned income and cash transfers. Minimum income cash transfers would be made to District residents without any income and those whose wages fell below the established income floor. A household’s cash transfer would be equal to the gap between their earned income and the income floor. Those who already earned above the income floor would not receive a transfer. For instance, if the District set the minimum annual income for a single, childless adult at \$40,000, someone who earned \$35,000 as a waiter would get an annual cash transfer of \$5,000 whereas someone else earning \$25,000 as a part-time nanny would receive a transfer of \$15,000. A computer programmer who earned \$110,000 per year would receive \$0 in cash transfers.

A guaranteed minimum income program could be designed so that workers would lose \$1 in cash benefits for every \$1 in earned income, but there are other ways to design the program that would better incentivize work. Following a model established by the EITC, a worker might instead lose 40 cents in cash payments for every \$1 in earned income.

Still, a guaranteed minimum income could create inefficiencies in the economy if residents choose to structure their lives in such a way as to maximize the value of their minimum income guarantee. For example, individuals might artificially reduce their work hours or not have a second earner in the household to maximize their cash payment. **Section 3.2.2** forecasts the economic impact of providing a guaranteed minimum income to residents whose income is below 100% of the Federal Poverty Level if all those who earned less than this level would react by dropping out of the workforce.

The District would also need to hire additional staff and build a new IT system to implement a guaranteed minimum income program. The costs might be similar to the OCFO's estimates for starting up a public family and medical leave program, which could be as high as \$40 million for the first year and \$82 million of the course of the four-year financial plan (D.C. Office of the Chief Financial Officer 2016b).

2.3. Universal Basic Income

With a universal basic income, all households or residents regardless of their income, health status, or participation in the labor market would receive a cash transfer of the same amount. No District household would be excluded from the benefit or receive a different sized payment because of their earned income or assets. A program with this design would not incentivize arranging one's affairs in such a way that maximizes benefit entitlements, such as working in the informal economy where income is often underreported or strategically reduce work hours (OECD 2017). Issuing the same payment to all residents would also be the most streamlined method of providing a minimum income.

Programs that directly benefit large segments of the population tend to enjoy greater public support than those which are only open to subgroups. A universal basic income program might not carry the social stigma that other needs-tested social insurance benefits may bear. For instance, Social Security is popular with Americans across the political spectrum in part because those who pay into the system expect that they will receive its cash when they reach retirement age (National Academy of Social Insurance 2017, Pew Research Center 2011). In contrast, cash assistance programs that are only open to the poor enjoy less support (Parker 2012, Lauter 2016, Rasmussen Reports 2012).

One way to implement a universal basic income would be to distribute cash payments valued at the Federal Poverty Level. This would amount to payments of \$12,060 to each of the District's 554,121 adult residents and \$4,180 to each of the District's 118,107 children. If the population size remained stable, the payments would cost approximately \$7.2 billion per year or 94.7% of the District's FY 2017 local operating budget (see **Table 17**). However, as discussed in **Appendix 1**, the Federal Poverty Level is well below what it costs to live in the District. If the local government were instead to provide a universal basic income payment equal to 300% of the Federal Poverty Level, each adult resident would receive \$36,180 and each child would be paid \$12,540. Such a benefit would require outlays of about \$21.5 billion per year if the population size stayed the same, or 283% of the FY 2017 local operating budget. However, a cash payment worth 300% of the Federal Poverty Level would still be too low for households with children to meet all their basic needs without other forms of social safety net services. A cash payment set at 450% of the Federal Poverty Level, which is closest to the cost of living estimate developed in **Section 1.1**, would require annual outlays of approximately \$32.3 billion. In other words, a

three-person household would receive \$91,890 per year in universal basic income payments (U.S. Department of Health and Human Services 2017).

Providing a universal basic income payment that was high enough to meet all of a household’s basic needs would in all likelihood supplant rather than supplement their wage and salary income. In other words, many households would decide to live off their universal basic income payment and drop out of the workforce. All of the universal basic income pilot programs which the authors of this report found issued avoided this problem by offering far smaller cash payments than what is being suggested here. For example, the City of Stockton, California’s universal basic income experiment plans to issue monthly \$500 checks to study participants. While this could significantly boost low and moderate households’ incomes, it is far below the District’s cost of living.

Table 17: Cost of Providing a Universal Basic Income at 100-450% of the Federal Poverty Level

	Estimated Population, 2015	Federal Poverty Level (FPL)	Estimated Annual Basic Income Payments at 100% FPL	Estimated Annual Basic Income Payments at 300% FPL	Estimated Annual Basic Income Payments at 450% FPL
Children under 18	118,107	\$4,180	\$493,687,260	\$1,481,061,780	\$2,221,592,670
Adults	554,121	\$12,060	\$6,682,699,260	\$20,048,097,780	\$30,072,146,670
Total	672,228		\$7,176,386,520	\$21,529,159,560	\$32,293,739,340

A universal basic income approach would be an expensive and inefficient way to ensure that poverty does not force any District residents from forgoing their most basic needs. Public resources would be used to fund cash payments for individuals and households who do not need them rather than targeting finite resources where they could do the most good. Paying cash benefits to middle and higher-income households while charging them taxes to finance this benefit is also inefficient, amounting to giving with one hand and taking with the other (OECD 2017). Further, a system that provides everyone with the same amount of money would be equal but not be equitable. Some individuals and households would need a smaller basic income payment than others to afford the same basic necessities. For example, a household that was earning \$15,000 per year would likely need a larger basic income payment to achieve the same minimal standard of living as a household that had a \$60,000 income. For these reasons the report does not attempt to model the economic impact of providing a universal basic income to all District residents.

3. Forecasted Impact of a Minimum Income Program on D.C.'s Economy & Labor Market

Section 3 estimates the economic and labor market consequences of providing a minimum income to the District of Columbia's residents. This section compares the projected economic conditions under the "baseline" economic forecast, in which the District continues to have no minimum income program, to the projected economic conditions under the "policy" forecast, which captures the impact of implementing two different types of minimum income programs. The forecast provides year-by-year changes to the District and the region's economy over a ten-year period beginning in 2018.

This section is based on projections developed using an economic forecasting model developed by Regional Economic Models Inc. (REMI). The Council's Budget Office commissioned REMI to build a customized 70-sector economic model of the Washington, D.C. Metropolitan Statistical Area, which REMI updates on a regular basis to reflect evolving economic conditions. The model incorporates the U.S. Bureau of Economic Analysis's input-output tables that reflect the region's unique inter-jurisdictional and inter-industry economic patterns. Many local, state, and federal government agencies, universities, nonprofit organizations, and management consulting firms rely upon REMI's forecasting models to inform decision makers.

3.1. Overview of the Modeling Approach and Range of Assumptions

This section considers how a minimum income program would affect the District's economy over a ten-year time frame. It examines two ways to strengthen the District's social safety net by providing additional income to low-income District residents. One approach would be for the District to increase the value of refundable tax credits, such as the EITC, or create a new, targeted minimum income refundable tax credit. A second approach would be for the District to issue guaranteed basic income cash payments to all residents whose income falls below a certain income floor, such as 100% of the Federal Poverty Level. To use the model, the authors of this report identified the ways in which establishing a minimum income program would affect the District's economy. Then, having developed estimates for the magnitude of these immediate economic effects, or drivers, the researchers converted these estimates into input variables for the model. By running the simulation, the researchers developed predictions of how a minimum income program would affect the District's employment and GDP.

Establishing a minimum income program in the District would create three drivers for affecting the economy. First, what would be the economic stimulus if eligible households received a financial boost through a minimum income program? Second, what would be the ripple effects if the District paid for a minimum income program by raising personal income tax or property tax rates? Third, what would be the impact of a minimum income program that rendered both District residents and their government ineligible for certain sources of federal funds? The forecasting model applies a system of equations that are derived from fundamental economic principles to predict the relative impacts of simultaneously increasing transfer payments to District residents, raising personal income or property tax rates, and reducing federal spending.

To understand how the forecasting model predicts the impact of the minimum income program on the economy, it may be helpful to discuss the three pieces of the simulation in isolation. The model captures an increase in income for the beneficiaries of the minimum income program as an increase in the magnitude of transfer payments for District residents. This means that the model is prompted to increase residents' disposable income, which in turn boosts consumption. Therefore, taken in isolation, it is not surprising that providing additional income to low-income District residents stimulates the local economy in proportion to the amount of new spending that occurs on goods and services purchased within the District. However, the REMI model does not treat an increase in transfer payments to low-income District residents as altering the real relative wage rate in the District, compared to Maryland and Virginia.⁵⁴ For this reason, increasing transfer payments does not lead to an influx of new economic migrants to the District. The analysis includes a range of estimates for the magnitude of the boost in consumption supported by new spending from low-income District residents, which correspond to the four forecasting simulations as described in **Section 3.2**.

In contrast, raising D.C.'s personal taxes (and property taxes) reduces residents' overall disposable income has a dampening effect on consumption in the District.⁵⁵ Raising taxes can also impact households' decisions to live in the District or move elsewhere. If personal taxes increase in the District, its real relative wage rate declines compared to Virginia and Maryland. Consequently, the District would become less attractive to economic migrants. The analysis assumes that a minimum income program would be primarily paid for by an increase in personal income taxes. The study's authors selected this method because income taxes are one of the most powerful policy mechanisms available to redistribute wealth. The study also considers paying for the new program through a combination of increases to the District's personal income tax and property tax rates.⁵⁶

A third element of the simulation involves the effect of the negative income tax or guaranteed minimum income payments on D.C. residents' eligibility for federal income maintenance payments or other federal assistance. Taken in isolation, the model treats any decrease in federal payments to the District as negatively affecting the local economy, because it would reduce the amount of spending on goods and services in the District by the recipients of federal payments. Many federal assistance programs are only available to low-income households, especially those whose pre-tax income falls below 100% of the Federal Poverty Level. If the federal government treats households' minimum income benefit as earned income, as it already does with Social Security benefit payments, they may be rendered ineligible for federally funded social safety net services, such as TANF.

The size of the benefit offered by a District-provided guaranteed minimum income program is likely to determine the degree of reduction in federal income maintenance and other federal payments to the District. For example, different benefit programs would be impacted if the minimum income program raises households' income to 100% of the Federal Poverty Level versus 300% or 450%. The District government also receives federal funds based on the number of low-income residents. For instance, the District receives federal formula grant funds under Title I of the "Elementary and Secondary Education Act" because of the high number of children from low-income families that are served by its school system. Since a minimum income program would raise all low-income households' incomes, the District could become ineligible for Title I federal grants, which totaled \$45.9 million in FY 2016. Reductions in federal payments to District households or the District government would counterbalance the gains to low-income District residents from establishing a guaranteed minimum income program.

Finally, there is a question of whether providing a guaranteed minimum income would affect low-income District residents' incentive to work. Since the guaranteed minimum income program weakens the connection between employment and income, residents who have jobs that they find unsatisfying could decide to reduce or eliminate their hours of work and still support themselves thanks to the guaranteed minimum income. While there may be social advantages to reducing work hours, the program would cost more money to operate if people react by reducing their work hours or dropping out of the labor force. The OCFO Office of Revenue Analysis projected that if the District offered a minimum income benefit worth 100% of the Federal Poverty Level, all households with incomes below this level would stop working altogether. For the sake of comparison, the Budget Office modeled the Office of Revenue Analysis' projection as well as scenarios in which work effort declined by 50% or did not decline at all upon implementation of the guaranteed minimum income program.

3.2. Four Different Forecasting Simulations

Uncertainty is inherent to any forecasting exercise. This study addresses uncertainty in the model by forecasting four different minimum income policy options using a range of response scenarios that are summarized in **Table 18**. These four simulations differ from each other based on the following factors: the benefit amount and the payment mechanism; the cost of the program and funding mechanism; and the effect that it would have on work effort, federal resources, and local matching funds. These simulations test benefits worth 100% and 450% of the Federal Poverty Level (see **Table 19**) (U.S. Department of Health and Human Services 2017). Consequently, this study provides a spectrum of possible economic impacts of a minimum income program rather than a single predictive data point.

Table 18: Summary of Forecasting Simulations

Simulation	Type of Program	Total Cost of Supplemental Income	Work Effort in Households that Receive Benefit	Federal Payments & Federal Grants	Local Budget's Match for Federal Payments	Funding Mechanism
(1) Increase local EITC to provide households with income equal to 100% of FPL	Negative income tax	\$380M	No effect	No effect	No effect	Personal income taxes
(2) Provide cash benefit payments to 100% of FPL	Guaranteed Minimum Income	\$710M	100% reduction	No effect	No effect	Personal income taxes
(3) Provide cash benefit payments to 450% of FPL	Guaranteed Minimum Income	\$7B	50% reduction	\$2.6B decrease	\$1B offset to minimum income program	Personal income taxes & property taxes
(4) Provide cash benefit payments to 450% of FPL	Guaranteed Minimum Income	\$9.3B	100% reduction	\$2.6B decrease	\$1B offset to minimum income program	Personal income taxes & property taxes

Table 19: 100% and 450% of the Federal Poverty Level by Household Size

Number of People in Household	1	2	3	4	5	6	7	8
100% of the Federal Poverty Level	\$12,060	\$16,240	\$20,420	\$24,600	\$28,780	\$32,960	\$37,140	\$41,320
450% of the Federal Poverty Level	\$54,270	\$73,080	\$91,890	\$110,700	\$129,510	\$148,320	\$167,130	\$185,940

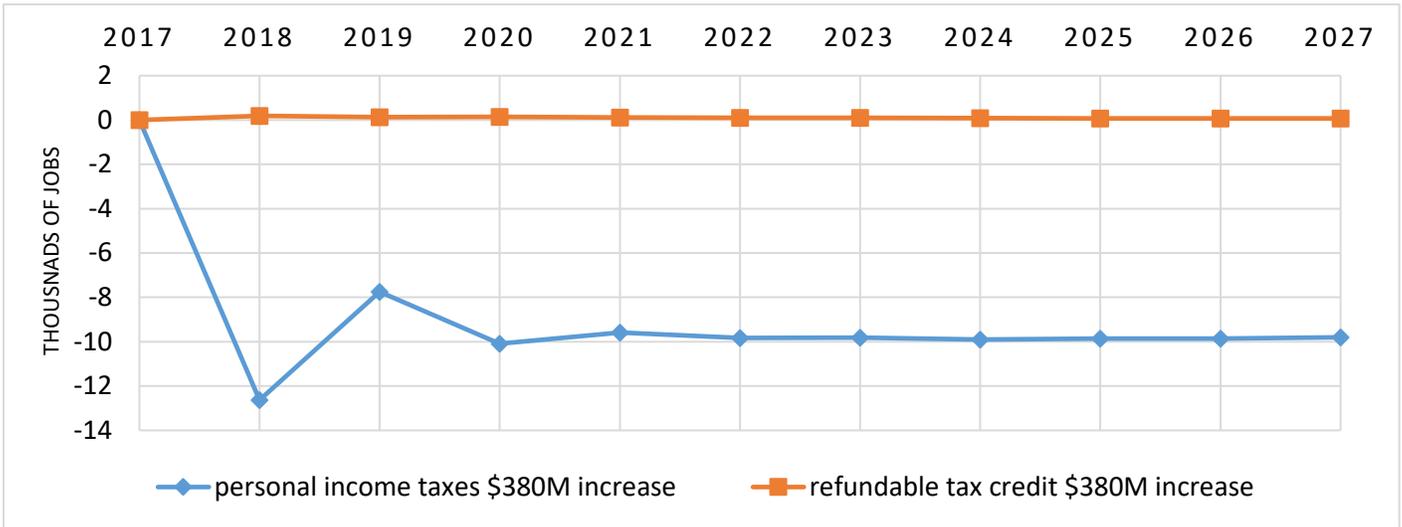
3.2.1. *Simulation 1: Negative Income Tax at 100% of the Federal Poverty Level via Refundable Tax Credit and No Effect on Work Effort or Federal Payments*

Simulation 1 forecasts the results of providing a minimum income through a negative income tax worth 100% of the Federal Poverty Level (see **Section 2.1**). This refundable tax credit would create an income floor. For instance, a family of three with no wage or salary income would receive approximately \$20,090 in refundable tax credits each year. The District would need to raise approximately \$380 million in local tax revenue to finance such a credit.⁵⁷ This version of the forecast assumes that the new tax credit would not impact the federal funds owed to the District. Based on information supplied by the D.C. Department of Human Services and the D.C. Department Health Care Finance, it does not appear that a refundable tax mechanism would place the District in significant risk of losing federal income maintenance and other assistance for low-income residents.

Simulation 1 isolates the impact of raising personal income taxes and increasing transfer payments to households with incomes below 100% of the Federal Poverty Level. In other words, this scenario models what would happen if these two levers were adjusted: a \$380 million increase to household’s incomes through a transfer payment and a \$380 million increase in personal income taxes.

The model predicts that raising income taxes to fund the new minimum income benefit would have a dampening effect on the number jobs in the District that are held by its residents. In contrast, increasing the District EITC to low-income households would have a stimulating effect on residence-adjusted employment in the District. **Figure 9** separates out the impact that each of this simulation’s two levers—household income and personal income taxes—would have on residence-adjusted employment.⁵⁸

Figure 9: Residence-Adjusted Employment in DC: Raising Income Taxes by \$380M vs. Increasing Refundable Tax Credit by \$380M (Thousands of Jobs)



Taken together, an increase in transfer payments and personal income tax rates would result in approximately 9,100 fewer jobs in the District that are held by District residents over a ten year period than if no minimum income policy were implemented, as shown in **Figure 10**. The model predicts that **Simulation 1** would have a relatively modest negative impact on total employment in the District (all jobs held by both District and non-District residents) and a somewhat larger negative effect on residence-adjusted employment. As shown in **Figure 11**, the District economy would support approximately 1,600 fewer jobs ten years after the minimum income program began than under the baseline forecast. In addition, under **Simulation 1** the District’s gross domestic product (GDP) would be about \$99 million smaller by 2027 than it would have under the baseline scenario.

Figure 10: Residence-Adjusted Employment in DC: Minimum Income at 100% of Federal Poverty Level via Refundable Tax Credit (Thousands of Jobs)

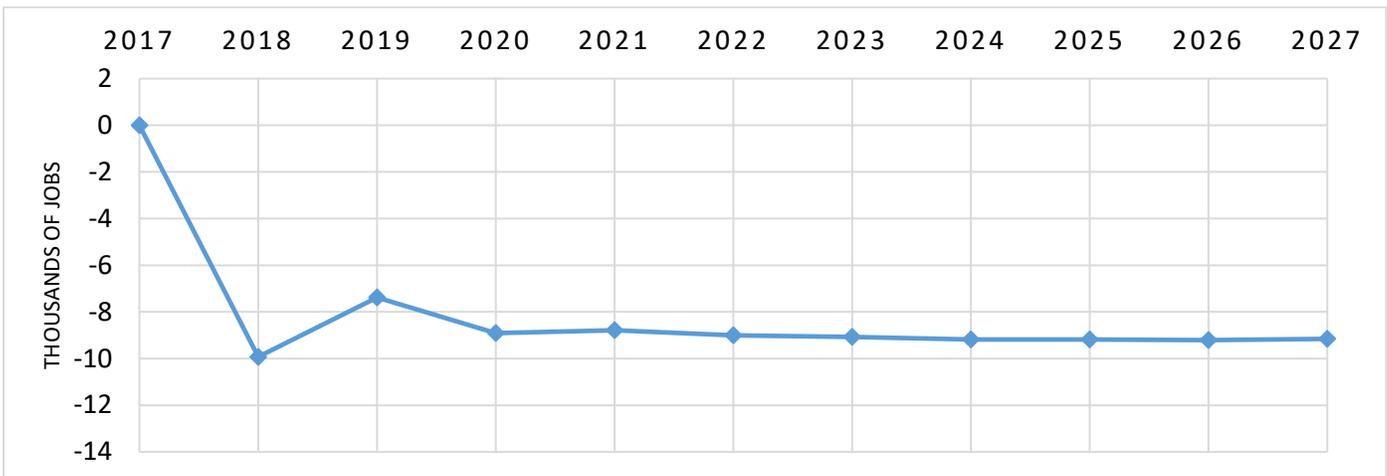
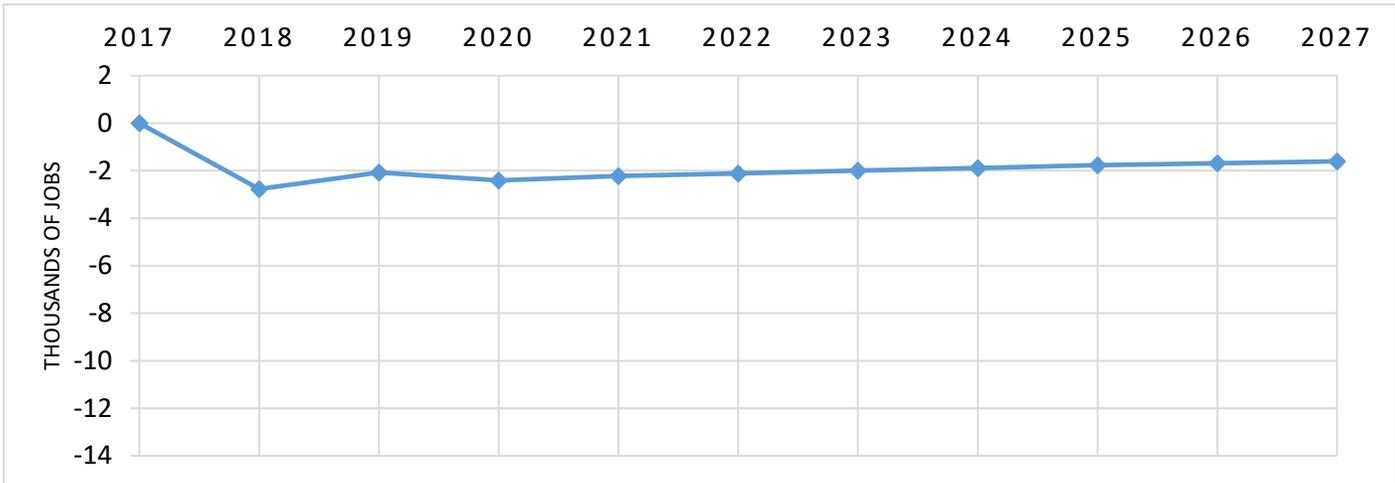


Figure 11: Total Employment in DC: Minimum Income at 100% of Federal Poverty Level via Refundable Tax Credit (Thousands of Jobs)



3.2.2. *Simulation 2: Guaranteed Minimum Income of 100% of the Federal Poverty Level via Cash Transfer Payments with 100% Reduction in Work Effort and No Effect on Federal Payments*

Simulation 2 is structured as a minimum income cash transfer program for low-income households. The cash payment would guarantee that no household has an annual income below 100% of the Federal Poverty Level. Households whose wage and salary earnings are less than that threshold would be entitled to a minimum income cash payment. Their payment would be the difference between their wage and salary earnings and the Federal Poverty Level.

This simulation expects that households that receive the cash payment would respond by dropping out of the workforce. The Budget Office also assumed that because the minimum income is set to 100% of the Federal Poverty Level, District households will not compromise their eligibility for federal income-based assistance. The District would need to increase its tax revenues from personal income taxes by approximately \$710 million per year to fund his version of the program. This simulation projects that the program would have no impact on federal payments.

Simulation 2 is projected to have a somewhat stronger negative impact on the District’s economy than Simulation 1 because the former projects a greater increase in personal income taxes. The forecasting model predicts that the District’s economy would support 3,000 fewer jobs by 2027 than under the baseline. **Simulation 2** also results in 17,300 fewer jobs held by District residents by 2027. Further, the District’s GDP in 2027 would be about \$185 million smaller than it would be under the baseline.

3.2.3. *Simulation 3: Guaranteed Minimum Income of 450% of the Federal Poverty Level via Cash Transfer Payments with 50% Reduction in Work Effort and \$2.6B Reduction in Federal Payments*

Simulation 3 tests what would happen if all District households received a guaranteed minimum income approximately equal to the cost of living estimate developed in **Section 1** or roughly 450% of the Federal

Poverty Level. For example, this corresponds to annual income for a family of three of approximately \$90,405. Households whose wage and salary earnings are less than 450% of the Federal Poverty Level would be entitled to a minimum income cash payment. Their payment would be the difference between their wage and salary earnings and an annual income equal to 450% of the Federal Poverty Level.

Since the benefit in this scenario is a cash payment rather than a refundable tax credit, and the cash payment is many multiples of the Federal Poverty Level, for the purposes of calculating eligibility for federal benefits it would probably be viewed as an increase to their earned income. Consequently, households in the District and the D.C. government would no longer qualify for many sources of needs-tested federal funds. In FY 2016, these payments totaled approximately \$2.6 billion, which are broken out by program in **Table 16**. Losing the federal funding would also mean that the District would no longer have to use local tax dollars to meet the federal programs' local match or maintenance of effort requirements. This change would save the District government approximately \$1 billion per year.

A benefit worth 450% of the Federal Poverty Level would have the potential to supplant rather than supplement households' earned income. Simulation 3 projects that the minimum income's cash payment would result in a 50% reduction in work effort among District households who earn less than 450% of the Federal Poverty Level. Although this assumption departs from the parameters of the OFCO's initial analysis, the Budget Office believes that a 50% reduction in work effort serves to establish a range of possible behavioral responses to a guaranteed minimum income of this magnitude. The District would have to raise an additional \$7 billion through the personal income tax and the property tax to pay for this program. To put this figure into perspective, the District collected \$2.48 billion in income and franchise taxes and \$2.65 billion in property taxes in FY 2017.

The forecasting model predicts that **Simulation 3** would have a significantly greater negative impact on the District's economy and labor market than both **Simulation 1** and **2**. In the program's first year, the District's GDP is predicted to be \$4 billion lower than the baseline scenario. The District would support 35,000 fewer jobs, and about 118,000 fewer District residents would be employed than under the baseline forecast. With time, the economy would be able to adjust and somewhat recover from the economic shock that the minimum income program generated. Ten years after the program begins, the GDP would be about \$2.2 billion lower than under the baseline forecast. However, the District's labor market would have a less pronounced recovery. By 2027, the District economy would support 21,000 fewer jobs than the baseline forecast, and approximately 101,000 fewer District residents would be employed.

3.2.4. Simulation 4: Guaranteed Minimum Income of 450% of the Federal Poverty Level via Cash Transfer Payments with 100% Reduction in Work Effort and \$2.6B Reduction in Federal Payments

Simulation 4 models the economic impact of a guaranteed minimum income worth 450% of the Federal Poverty Level. It applies many of the same assumptions as **Simulation 3**, with one important difference. This final scenario assumes that all District households with incomes less than 450% of the Federal Poverty Level would drop out of the workforce after a guaranteed minimum income program is introduced. This assumption aligns with the OCFO's initial analysis of the cost of a guaranteed minimum income program in the District. The cost of implementing this policy would be higher than any of the

other simulations modeled. Under **Simulation 4**, the District would need to raise an additional \$9.3 billion in local tax revenue.

This simulation would have the most significant negative impact on the District’s economy and labor market of the four simulations. The impacts would be greatest in the first year after the program was implemented, which would somewhat lessen over time. In the program’s first year, the model predicts that the District’s economy would be \$4.5 billion lower than the baseline scenario. By 2027, the District’s GDP is projected to be \$2.4 billion below the baseline forecast. The District would likely support 45,000 fewer jobs in the year after the minimum income program was implemented than it would have otherwise, but by 2027 this number would have fallen to 25,800. Residence-adjusted employment, or the number of jobs held by District residents, would be about 155,000 lower than the baseline forecast after the program’s first year. Ten years later, residence-adjusted employment would remain 138,800 lower than under the baseline.

3.3. Summary and Discussion the Four Simulations’ Results

The four scenarios forecasted predict that a minimum income program would have a negative impact on the District’s GDP, total employment, and residence-adjusted employment (see **Table 20**). However, the magnitude of the impact between the four simulations differs. The model estimates that **Simulations 1** and **2** would have a far smaller impact on the District’s labor market and economy than **Simulations 3** and **4**. The model results imply that the District’s economy is better positioned to absorb the impact of a minimum income program that provides benefits worth 100% of the Federal Poverty Level than it is for a program which distributes benefits worth 450% of the Federal Poverty Level and causes the District government and its residents to lose federal funds.

Table 20: Change in 2027 District Total Employment, Residence-Adjusted Employment, and GDP Compared to the Baseline

	GDP by 2027	Total Employment by 2027	Residence-Adjusted Employment by 2027
Simulation 1	-\$99 million	-1,600 jobs	-9,100 jobs
Simulation 2	-\$185 million	-3,000 jobs	-17,300 jobs
Simulation 3	-\$2.2 billion	-21,000 jobs	-101,000 jobs
Simulation 4	-\$2.4 billion	-25,800 jobs	-138,800 jobs

The model predicts that **Simulations 1** and **2** would have a relatively small impact on the District’s GDP, total employment, and residence-adjusted employment. In the baseline scenario, the District’s economy is expected to expand from \$127 billion in 2017 to approximately \$145 billion in 2027. The model predicts that under **Simulations 1** and **2** the District’s GDP would forgo \$99 to \$185 million in growth between 2017 and 2027. Under these simulations the District would also support between 1,600 and 3,000 fewer jobs ten years after the minimum income program began than under the baseline forecast. Still, a decrease of 1,600 jobs by 2027 in the District represents a small percentage of employment growth and an even smaller share of total employment in the District.⁵⁹ For example, the OCFO reported that employment in the District increased by an average of 11,118 jobs per year between 2013 and 2017

(D.C. Office of the Chief Financial Officer 2018a). Therefore, although the impacts on total employment in the District are negative, the economic modeling indicates that the magnitude of the impact on total employment would affect only the rate of job growth. That said, **Simulations 1** and **2's** impact on residence-adjusted employment in the District would be more pronounced. Over ten years, the number of jobs held by District residents would decline by about 9,100 to 17,300 jobs.

In contrast, establishing a guaranteed minimum income worth 450% of the Federal Poverty Level, as is done under **Simulations 3** and **4**, is projected to have a significant negative impact on both the District's GDP and total employment over ten years. The District's GDP would be \$2.2 billion to \$2.4 billion smaller and there would be between 21,000 and 25,800 fewer jobs in the District by 2027 than under the baseline scenario. Still, the model forecasts that the District would have a larger GDP and support more jobs in 2027 than it did in 2017. The program's impact on GDP and total employment is expected to somewhat diminish with time, as the District economy recovers from the shock of imposing a large increase in taxes and losing federal resources (see **Figure 12** and **Figure 13**Error! Reference source not found.). Under these simulations the District's GDP and total employment fare better than residence-adjusted employment.

The model predicts that a program which provides a guaranteed minimum income worth 450% of the Federal Poverty Level would have a persistent negative impact on residence-adjusted employment, or the number of jobs held by District residents. **Simulations 3** and **4** are expected to produce a negative residence-adjustment growth rate meaning that District residents would hold fewer jobs in 2027 than they did in 2017. Under **Simulation 3**, the District's economy would support 101,000 fewer jobs for residents than under the baseline, whereas in **Simulation 4** that number would be 138,000. To put this in perspective, approximately 374,000 District residents were employed in 2017 (D.C. Office of the Chief Financial Officer 2018a). In contrast, the minimum income programs modeled in **Simulations 1** and **2** forecast a slowing down of the growth in residence-adjusted employment's between 2017 and 2027 relative to the baseline scenario, but residence-adjusted employment would be higher in 2027 than it was in 2017 (see **Figure 14**).

A decline in residence-adjusted employment is a function of current residents deciding to move out of the District, fewer people moving into the District, and a weakening in the relationship between employment and income. It is especially noteworthy in the District because of the jurisdiction's unique laws. Under the "District of Columbia Home Rule Act of 1973," the District government cannot levy personal income taxes on residents commute in from elsewhere. If a dip in residence-adjusted employment lowers local personal income tax revenue, the District cannot not make up for the loss by taxing commuters more heavily.

Figure 12: Impact on District GDP (Billions of Dollars, 2015)

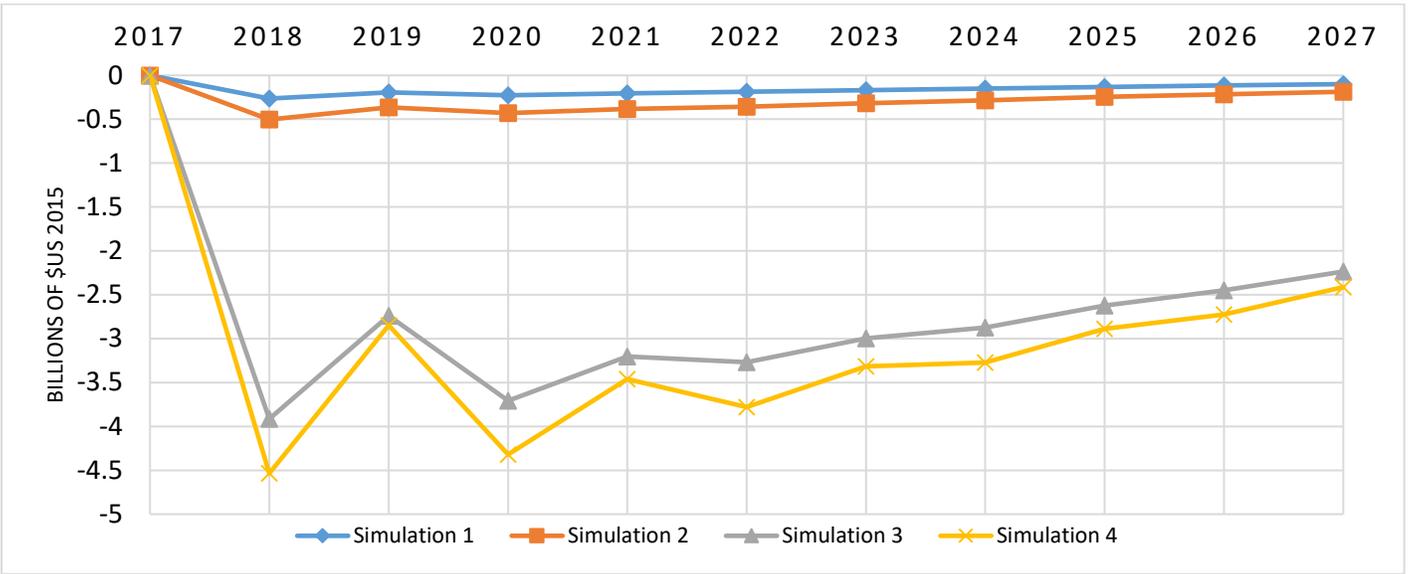


Figure 13: Impact on Employment (Thousands of Jobs)

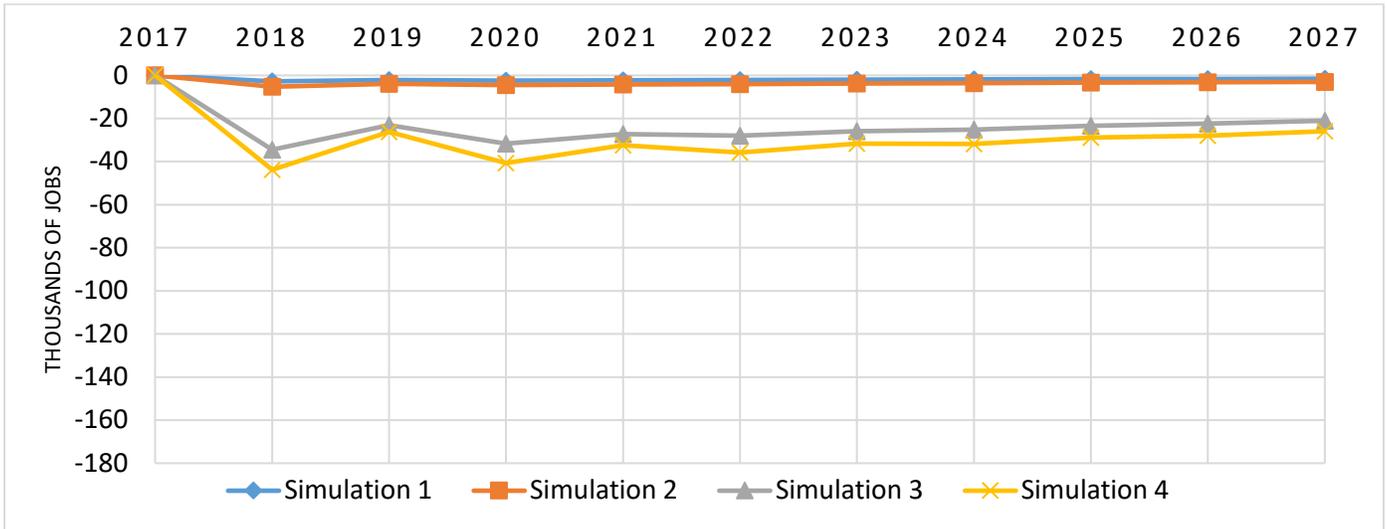
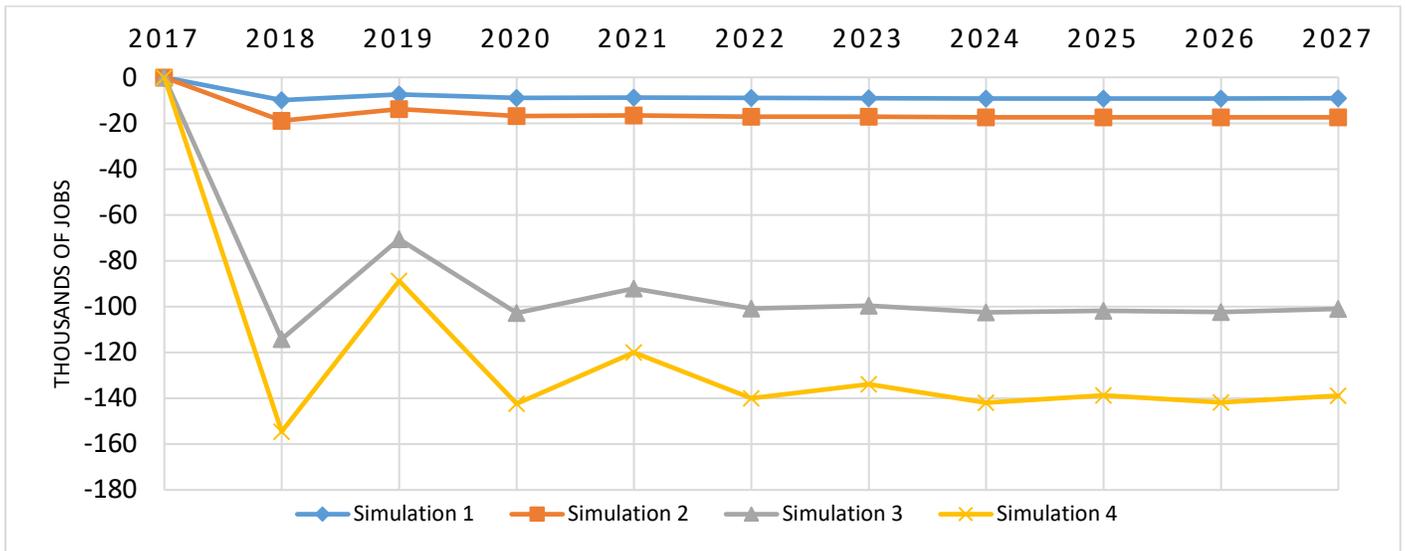


Figure 14: Impact on Residence-Adjusted Employment (Thousands of Jobs)



There are several explanations for why the model predicts that a minimum income program would have a negative impact on the District economy. First, changes to personal income or property taxes affect economic migration to the District, whereas an increase in transfer payments do not. Consequently, the economic stimulation generated by additional spending among low-income residents is outweighed by a dampening effect on spending from raising taxes and altering economic migration patterns.

Second, the District would need to raise personal income tax and property tax revenues by a proportionately greater amount than it would increase personal consumption. The District collected \$2.48 billion in income and franchise taxes and \$2.65 billion in property taxes in FY 2017. Providing cash payments equal to 100% of the Federal Poverty Level would need to be supported by \$380 million to \$710 million of new tax revenue, and a 450% of the Federal Poverty Level would require \$7 billion to \$9 billion in new funds. Thus, paying for a minimum income program would require raising the District's income, franchise, and property tax revenue by 7% to 14% for a more modest benefit or 136% to 175% for a more expansive benefit. By comparison, total personal consumption in the District in 2017 was about \$40 billion. Increasing low-income District residents' spending power to 100% of the Federal Poverty Level through a minimum income benefit would result in a 1.0% to 1.8% increase in the District's total consumption of goods and services relative to 2017, whereas a benefit worth 450% of the Federal Poverty Level would boost consumption by 18% to 23%.

Third, because providing a minimum income to District residents is likely to have a negative effect on low-income residents' incentive to work, non-residents would become more likely to fill any new jobs that become available. These non-resident workers would spend most of their paychecks from District firms on out of state goods and services, and their earnings would not be subject to the District's personal income tax.

Still, the forecasting model should be interpreted with the caveat that there is no way to predict the future. All forecasting models, including the REMI model used in the analysis, have sources of uncertainty that are associated with the underlying economic data and their structure and parameters.⁶⁰

The validity of forecasting models is also subject to modeler's approach. For example, another team of researchers might choose to use a different set of variables to model a minimum income program or make other assumptions about how different groups in the population spend an additional dollar of income. To maintain a balanced and objective analysis, the authors of this study chose to limit the number of detailed assumptions regarding differences in consumer spending behavior between different strata of the population income distribution. Therefore, this forecasting study's results depend on the model's accuracy in simulating the interaction of different economic drivers associated with the minimum income program.

Conclusion

A minimum income program could revolutionize the District of Columbia's social safety net. It could provide the jurisdiction with a new, comprehensive tool to alleviate poverty. Such a program could lead to positive outcomes for low-income residents and families, and it would put the District at the vanguard of social safety net policy innovation. However, because the concept is relatively untested, the body of evidence on its effects—positive or negative—is scant. In addition, it would be difficult for the District to go it alone on such a program. First, the District has limited flexibility in how it can spend the federal funds it receives for social safety net benefits. A minimum income program could put much of this federal funding at risk if the amount of cash assistance provided to low-income residents is so great that it renders them ineligible for means-tested federal supports. Second, to collect enough revenue to support a significant minimum income benefit, the District would likely have to raise its tax rates and in the process become a far more expensive place for wage earners to live than surrounding jurisdictions. A significant increase in taxes in the District would likely cause many current and prospective residents to settle outside of the city and destabilize the tax base.

This analysis estimates the cost of living for three District households and concludes that making ends meet is very expensive. For instance, a single parent with two young children would need a wage and salary of income of approximately \$96,885 per year to meet their basic needs in D.C. This study also assesses the strength of the existing social safety net and how far it goes in helping low-income households close the gap between what they need, what they earn through wage and salary income, and what the safety net provides. It reports that the social safety net is robust enough to meet certain configurations of low-income households' basic needs. That said, not all low-income are able to access the assistance they need or to which they qualify. The existing social safety net may be strong enough to allow a prototypical single parent living in the District with one or two children to meet their families' needs but only if they receive all the public benefit programs to which they are eligible and have earned income below the Federal Poverty Level (FPL). However, a single, working age adult without a disability whose earned income falls below the Federal Poverty Level would not be able to meet all their basic needs even if they received all the public social safety net supports to which they are eligible. This policy discussion could be furthered by a follow up study assessing the share of residents who are eligible for social safety net benefits are able to avail themselves of these services.

This report's economic forecast indicates that establishing a minimum income program in the District would negatively impact the local economy, although the magnitude of this impact largely depends on the program's design. A benefit delivered as a cash payment that would allow all District residents to cover the cost of all their basic needs but would have major implications for the District's economy and tax base. As modeled in **Simulations 3 and 4**, this approach would significantly reduce the number of jobs in DC held by District residents from current levels and could force the District to forgo about \$2.66 billion in federal payments and grants. Providing this level of income support would also require an increase in annual District expenditures of \$7 billion to \$9 billion per year, essentially doubling the District's local funds budget.

In contrast, a modest benefit implemented through a refundable tax credit mechanism is likely to have less of an impact on the District's economy and labor force. A more moderate cash payment or negative income tax, as modeled in **Simulations 1 and 2**, may provide additional resources to District residents without significantly reducing employment or putting federal funds at risk. However, depending on how the program is structured, such a program could still distort people's decision to maintain paid employment.

Lastly, the current analysis is limited by its design to an overview of multiple options for implementing a minimum income program. If the Council were to take further action to advance a minimum income program it would be important to address the following issues:

- What would be the target amount for a minimum income? Would it be based on the Federal Poverty Level or a different guideline? Would the minimum income supplement or supplant existing public social safety net programs?
- What is the most appropriate payment mechanism for providing a minimum income?
- Who would receive the minimum income?
 - Would eligibility be restricted to District residents? If so, would there be any waiting period for new District residents? Would eligibility depend on citizenship or immigration status?
 - Would those who are not employed be eligible? If so, would those who are dependents, incarcerated, hospitalized, or housed in homeless shelters be eligible? Would there be an age restriction? At what age range would the unemployed be eligible? Would those receiving retirement income be eligible?
 - Would there be any income or tax filing status restrictions place on those who are eligible? Would those with significant capital gains or business losses be eligible?

Appendix 1: Alternative Poverty Measurements

Federal and local governments use the Federal Poverty Level to determine eligibility for many social safety net programs. In 2017, the Federal Poverty Level for a four-person household in the 48 contiguous states and the District was \$24,600 (U.S. Department of Health and Human Services 2017). Social safety net programs define income in different ways and set the eligibility for certain federal benefits in relationship to the Federal Poverty Level. Families are eligible for SNAP benefits with incomes up to 130% of the Federal Poverty Level. Eligibility for WIC assistance extends up to 185% of the Federal Poverty Level; and in the District, childless adults can qualify for Medicaid if their incomes are at or below 215% of the Federal Poverty Level.

The Federal Poverty Level measure has several weaknesses which make it a less than ideal tool for determining the amount of money that households in the District need to meet their basic living expenses. Perhaps the most significant of these weaknesses is that it is based on the cost of food more than a half-century ago adjusted for inflation. Mollie Orshansky, a researcher at the Social Security Administrator, developed the Federal Poverty Level in the early 1960s, but she never intended it to serve as the yardstick by which the federal government measured poverty (Chan 2007). Nevertheless, the measure is still in use to this day, and its basic structure remains practically unchanged. Orshansky premised the Federal Poverty Level on the idea that families spend about one third of their after-tax income on food. She therefore set the threshold at three times the price of a low-cost, nutritious diet, allowing for variations by household size. The measure continues to use the cost of food as its baseline figure, and its annual updates are tied to growth in the Consumer Price Index (Fisher 1997, 2008). However, living costs and standards have changed in many ways since the 1960s. For instance, U.S. families now spend about 12% less on food and 8% more on housing than they did when Orshansky developed the measure (see **Table 21**). In addition, the Federal Poverty Level does not take into consideration regional variations in the cost of living. Meanwhile, the CES indicates that household spending in the Washington, D.C. metropolitan area is on average about 49% higher than the rest of the country and 25% higher than the national average.

A working group of federal government agencies developed an experimental poverty measure in 2010 called the Supplemental Poverty Measure (SPM) to provide an alternative way to estimate U.S. poverty. The SPM measures the cost of a basket of goods, including food, shelter, clothing, and utilities. It adjusts for some geographic differences in the cost of housing and accounts for subsidies that households receive from government social safety net programs, including tax credits and in-kind public benefit programs (Renwick and Fox 2016). The 2015 SPM for a household of four in the D.C. metropolitan region was \$33,382 for renters and slightly more for homeowners with a mortgage.

Still, the SMP does not consider many categories of expenses nor does it fully capture variation in cost of living by region. It does not include tax bills, childcare or child support payments, health insurance premiums, and other out-of-pocket medical expenditures. In addition, the SMP's regional cost of living differences only account for variations in housing expenses, ignoring other important drivers of regional cost of living differences such as transportation, groceries, utilities, and healthcare.

In response to the Federal Poverty Level and SMP's weaknesses, several non-governmental institutes have developed alternate poverty measures, including the Massachusetts Institute of Technology's Living Wage Calculator (LWC) and the Economic Policy Institute's Family Budget Calculator (FBC). The

LWC and FBC offer the most relevant and comprehensive approach to estimating the minimum income needed to live in the District (Massachusetts Institute of Technology 2017, Gould, Cooke and Kimball 2015). By studying the LWC and FBC's methodologies, the Council's Budget Office refined its estimate of the minimum income needed to live in the District. **Table 22** compares the OBD's cost of living estimate with those developed by other institutions.

Table 21: Consumer Expenditure Survey (CES), 1960 vs. 2015

	CES Families, 1960-61		CES Families, 2015		CES Families, 2015 Washington, D.C. MSA		Difference b/w 1960-61 & 2015, % of total expenditures
Average Family/Consumer Unit Size	3.2		3.1		2.7		
Average Income Before Taxes	\$6,246		\$83,678		\$115,258		
Average Income After Taxes	\$5,557		\$72,831				
Average Annual Expenditures	\$5,047	100%	\$65,228	100%	\$81,293	100%	
Food	\$1,235	24.5%	\$8,268	12.7%	\$7,840	9.6%	-14.8%
Tobacco	\$91	1.8%	\$389	0.6%	\$249	0.3%	-1.5%
Alcoholic Beverages	\$78	1.5%	\$565	0.9%	\$650	0.8%	-0.7%
Housing	\$1,461	28.9%	\$20,886	32.0%	\$29,753	36.6%	7.7%
Clothing	\$518	10.3%	\$2,211	3.4%	\$2,286	2.8%	-7.5%
Personal Care	\$145	2.9%	\$792	1.2%	\$816	1.0%	-1.9%
Medical Care	\$340	6.7%	\$5,044	7.7%	\$5,556	6.8%	0.1%
Recreation/Entertainment	\$200	4.0%	\$3,307	5.1%	\$3,192	3.9%	0.0%
Reading	\$45	0.9%	\$128	0.2%	\$239	0.3%	-0.6%
Education	\$51	1.0%	\$1,554	2.4%	\$2,243	2.8%	1.7%
Transportation	\$770	15.3%	\$11,374	17.4%	\$12,744	15.7%	0.4%
Other/Miscellaneous	\$111	2.2%	\$948	1.5%	\$1,014	1.2%	-1.0%
Cash Contributions			\$1,991	3.1%	\$4,180	5.1%	5.1%
Personal Insurance and Pensions			\$7,771	11.9%	\$10,532	13.0%	13.0%

Table 22: Minimum Income Needed to Live in DC, By Household Size and Estimating Tool

	FPL	SPM*	FBC	LWC	Budget Office
Tania Slocum (1 Adult)					
Annual Income Needed	\$12,060	\$15,865	\$42,119	\$30,254	\$36,988
Hourly Wage Needed	\$5.80	\$7.73	\$20.25	\$14.55	\$17.78
The DeRussys (1 Adult & 1 Child)					
Annual Income Needed	\$16,240	\$23,940	\$78,673	\$64,268	\$66,113
Hourly Wage Needed	\$7.81	\$11.51	\$37.82	\$30.90	\$31.79
The McNairs (1 Adult & 2 Children)					
Annual Income Needed	\$20,420	\$28,421	\$104,026	\$79,252	\$96,885
Hourly Wage Needed	\$9.82	\$13.66	\$50.01	\$38.10	\$46.58

*SPM from 2015 using the Washington, D.C. metropolitan area multiplier and assuming households rent their homes.

Appendix 2: Needs Assessment of Three Fictional D.C. Households

	Cost of Living				Value of Public Social Safety Net				Unmet Needs (Cost of Living – Safety Net)		
	Tania Slocum	The DeRussys	The McNairs		Tania Slocum	The DeRussys	The McNairs		Tania Slocum	The DeRussys	The McNairs
	1 Adult (25 yr)	1 Adult (25 yr) & 1 Child (2 yr)	1 Adult (25 yr) & 2 Children (2 & 9 yr)		1 Adult (25 yr)	1 Adult (25 yr) & 1 Child (2 yr)	1 Adult (25 yr) & 2 Children (2 & 9 yr)		1 Adult (25 yr)	1 Adult (25 yr) & 1 Child (2 yr)	1 Adult (25 yr) & 2 Children (2 & 9 yr)
Housing	\$16,032	\$16,848	\$19,440		\$0	\$14,652	\$16,794		(\$16,032)	(\$2,196)	(\$2,646)
Healthcare	\$3,856	\$7,648	\$10,740		\$3,856	\$7,648	\$10,740		\$0	\$0	\$0
Childcare	\$0	\$16,025	\$26,052		\$0	\$16,025	\$25,612		\$0	\$0	(\$440)
Food	\$3,005	\$4,497	\$7,313		\$2,304	\$4,028	\$6,531		(\$701)	(\$469)	(\$782)
Transportation	\$2,953	\$2,953	\$5,221		\$80	\$80	\$1,970		(\$2,873)	(\$2,873)	(\$3,251)
Utilities	\$2,417	\$2,996	\$2,996		\$1,002	\$1,302	\$1,302		(\$1,415)	(\$1,694)	(\$1,694)
Miscellaneous	\$3,204	\$6,408	\$9,612		\$0	\$0	\$0		(\$3,204)	\$2,342	\$138
TANF Benefits	\$0	\$0	\$0		\$0	\$8,750	\$9,750		\$0	\$8,750	\$9,750
State & Local Taxes	\$375	\$560	\$675		\$897	\$4,428	\$7,100		\$522	\$3,867	\$6,425
Cost of Living:	\$31,842	\$57,935	\$82,049	Value of Benefits:	\$8,139	\$56,913	\$79,799	Salary & Wage Income:	\$4,903	\$7,320	\$8,820
								Unmet Needs:	(\$18,800)	\$6,298	\$6,571

Appendix 3: Minimum Income Pilot Projects and Outcomes

Early Minimum Income Studies

A handful of pilot programs have field-tested the provision of a universal basic income or a minimum income, the most famous of which was the MINCOME experiment. The earliest studies began in the late 1960s and early 1970s in the United States and Canada, after which point interest in such a public policy intervention waned. These early pilot programs were short-term experiments, and they are difficult to evaluate because of incomplete data collection methods. They all tested a delivery mechanism called the negative income tax, and none of them were replicated. They were intended to supplement the households' earned income, not replace it. The experiments differed from one another with respect to their design, income threshold, tax rate, sample compositions, and data points collected, but they all targeted low-income households.

The first pilot minimum income programs began in the United States under President Richard Nixon. His administration proposed the Family Assistance Plan (FAP) in 1969, which would have replaced various social support programs with cash payments to low-income households provided that they met certain work requirements (The Family-Assistance Plan: A Chronology 1972). For each additional dollar of earned income, the cash payment would be reduced by 50 cents. The plan was framed as a way to eliminate poverty, quell social unrest, and address the Nixon administration's concerns over the efficiency and effectiveness of existing social safety net programs. During a national address on his administration's plan to reshape welfare, Nixon said "It is morally wrong for a family that is working to try to make ends meet to receive less than a family across the street on welfare" (Richard Nixon Foundation 2014). His plan met with condemnation from both sides of the political aisle. Members of Congress were reluctant to lend support due to a "widespread fear that a guaranteed income would reduce the work effort of poor breadwinners and, as a result, cost taxpayers a great deal of money" (Munnell 1986, Lapman 1969). Although Congress never passed the Family Assistance Plan, the Nixon administration pressed ahead and commissioned four negative income tax (NIT) pilot programs. Nixon's concept would also serve as the model for welfare redesign in the mid-1990s (Richard Nixon Foundation 2014).

Under R. Sargent Shriver's leadership, the Office of Economic Opportunity ran four minimum income experiments to study whether an income guarantee disincentives paid employment (see **Table 23**). The experiments randomly assigned individuals to alternative programs as well as treatment and control groups. The data points collected by these studies included time spent working, school attendance, health, and marital status (Levine, et al. 2005). Expenditures on these experiments totaled \$566 million adjusted for inflation; of that figure, direct payments to families totaled \$143 million (Robins 1985).

New Jersey and Pennsylvania: The first experiments were conducted in urban industrial areas from 1968 to 1972. Over thirteen hundred low-income households participated. Eligibility was limited to two-parent households with incomes at or below 150% of the poverty level (Robins 1985). The households all had a working-age male head of household (Widerquist 2005).

Rural Income Maintenance Experiment (RIME): From 1969 to 1973, 809 low-income families in rural Iowa and North Carolina participated in an experiment that used the same treatments and

the same selection criteria as the New Jersey study except that it included single-parents and female-headed households (Widerquist 2005, Robins 1985).

Gary, Indiana: The experiment ran from 1971 to 1974 and included 1,780 households. Only African American households were eligible for the study, and single women headed 59% of the participating households. The study admitted households up to 240% of the Federal Poverty Level. It provided social services counseling and child care subsidies in addition to a cash payment (Hum and Simpson 1993).

Seattle and Denver (SIME/DIME): This was the longest running of the four NIT experiments, lasting from 1971 to 1982. It also included the largest sample size: 4,800 households with at least one dependent (Widerquist 2005). Single-parent households in the study had earned incomes below \$11,000, and two-parent households' earned income fell below \$13,000. Seventy-one percent of households participated for three years, and another 25% participated for five years. In addition to income supports, the experiment provided counseling and job training subsidies.

Table 23: Summary of Negative Income Tax (NIT) Pilot Programs

	New Jersey	RIME Iowa & North Carolina	Gary, IN	SIME/DIME Seattle & Denver
Duration	1968-1972	1969-1973	1971-1974	1971-1982
Participants	1,357 families	809 families	1,780 families	4,800 families
Eligibility	Two-parent households w/ at least 1 dependent and income <150% of poverty line	Rural areas only; households w/at least 1 dependent and income <150% of poverty line	Black households, head 18-58 w/at least 1 dependent and income <240% of poverty line	Families w/at least 1 dependent and incomes <\$11K (single parent) or \$13K (two-parent)
Treatment	8 plans w/varied guarantee levels at (50-125% of the poverty line), and varied offset tax rates (30-70%). Breakeven levels ranged from 100-250% of poverty line	8 plans w/varied guarantee levels and offset tax rates (30-70%)	4 plans, including treatments with counseling, day care subsidies	11 plans w/3 guarantee levels: \$3800 (95% poverty line), \$4800 (120% of PL), \$5600 (140% of PL) & 4 offset tax rates; 4 groups: (a) NIT only, (b) counseling /training only, (c) NIT and counseling /training, (d) no treatment

Around the same time as the four pilot studies in the U.S., the Canadian government developed the Manitoba Basic Annual Income Experiment (MINCOME) as an attempt to reform the administration and operations of the country's social security programs (see **Table 24**). The study lasted from 1974 to 1979. As with the U.S. experiments, MINCOME measured the impact of a guaranteed annual income on workforce participation (Mason 2017). Lead researcher Ronald Hikel described it as "probably the biggest controlled social science experiment in Canada" to date (Gardner 2016).

The MINCOME study stands apart for including a saturation site in which all residents of one small town were entitled to participate in the pilot. Ultimately, one-third of residents in the town of Dauphin qualified for the study and received income supports. The experiment offered households in this small

Manitoba community with a standardized guaranteed income level that only varied by household size. For every \$1 of earned income, a participating household’s MINCOME benefit was reduced by 50 cents so as to incentivize paid employment. It provided a significant increase in dependable income, especially for those residents those that had not previously qualified for social assistance (Forget 2011). Although participants received income supports for nearly four years, data collection ended after two years (Forget 2011).

The MINCOME study was also piloted in Winnipeg and across dispersed sites in rural Manitoba (see **Table 24**). Unlike Dauphin, these sites randomly assigned participants to a treatment and a control group. Families in the treatment group were subdivided into seven different, randomly assigned types of income supports (Hum and Simpson 1993, Mason 2017). The families in the treatment groups received an income guarantee according to family size (Can\$3,800, Can\$4,800, and Can\$5,800 for a family of four) that was reduced by a specific amount (35, 50 or 75 cents) for every dollar they earned by working. The most and least generous income guarantees and phase out combinations were not tested (Hum and Simpson 2001).

Table 24: MINCOME Study

	Dauphin	Winnipeg/Rural
Duration	1974-1979	1974-1979
Participants	1,300 families & individuals	1,300 families & individuals
Eligibility	Everyone was considered; 1/3 of the residents qualified.	Families with heads <58 years old, incomes <C\$13,000 (family of 4)
Treatment	1 plan: Monthly cash payment C\$3,800; 50 cents was subtracted from every \$1 earned from other sources; replaced income assistance and other forms of public welfare	7 plans: varying tax rate and guaranteed income

Findings of Completed Minimum Income Experiments

The findings of completed minimum income experiments are discussed below, with attention to their impact on labor supply, family stability and spending, and child well-being. However, it should be noted that these are generalized findings. Results often varied both between and within experiments.

Labor Supply Response

Most studies indicate that households that received a minimum income benefit spent fewer hours in paid employment than the control group, but the decrease was far less significant than researchers had expected (Hum and Simpson 1993). The U.S. studies found a 13% reduction in work effort for the entire household. On average, male primary breadwinners reduced their labor supply by about the equivalent of two weeks of full-time employment. Female primary and secondary earners reduced the amount of time that they spent in paid employment by the equivalent of three weeks of full-time employment. Youth also spent the equivalent of four fewer weeks employed (Robins 1985). One commentator also noted that because the experiments were time limited, people may have been more reluctant to drop out of the workforce (Widerquist 2005).

In contrast, the MINCOME study found a much smaller reduction in hours of paid employment, with decreases of 1% among men, 3% among married women, and 5% among unmarried women (Hum and Simpson 2001). One analysis attributed the reduction in women’s paid employment to mothers who

wanted to spend more time with their children; similarly, teenagers who chose to stay in school (Forget 2011). The presence of preschool children in the home also impacted study participants' labor supply; in these households, men's labor supply sharply rose and women's declined. At least one analysis concluded that the study indicated that changes in family composition may have far more impact on labor supply than a guaranteed-income program (Hum and Simpson 1993).

Spending Trends and Family Stability

NIT experiments generally had beneficial impacts on the treatment group's health, homeownership, and other indicators of well-being (Widerquist 2005). The experiments' effects on housing expenditures were lower than anticipated, leading one researcher to infer that the participants did not view the quality of housing as their most pressing problem or the time-limited nature of the experiment made people reluctant to move. However, the same analyst found that the data from the Gary and SIME/DIME sites indicated a 4-6% increase in home ownership among participants (Hanushek 1986). Anecdotal information from the MINCOME study shows recipients used additional funds for employment training, transportation, and a number of other things that would improve quality of life (Forget 2011). In SIME/DIME, there were positive effects found on adult continuing education (Levine, et al. 2005). Study participants did not tend to increase their spending on luxury goods (Hanushek 1986).

An analysis of health-related data from the MINCOME study found that in Dauphin hospital visits dropped 8.5 There were also fewer incidents of work-related injuries and emergency room visits due to accidents and injuries.⁶¹ There was also a reduction in rates of psychiatric hospitalization and the number of mental illness-related consultations with health professionals (Forget 2011). The Gary experiments showed an increase in birth rates among its participants, but the MINCOME study did not replicate this finding (Levine, et al. 2005, Forget 2011). One widely-reported conclusion was that a minimum income payment caused the rate of marriage dissolutions to grow by more than 50%. This finding was later debunked, having been found to be based on a statistically insignificant data point (Forget 2011).

Child Well-Being

Analysis of the negative income tax's impact on children was focused primarily on quantity of schooling. The U.S. studies found that receiving a minimum income had a positive effect on school attendance and was linked to a reduction in youth's working hours (Hanushek 1986).

The New Jersey experiment found that the income support significantly reduced school drop-out rates (Levine, et al. 2005). The treatment was associated with a six month increase in years of schooling for 18- and 19- year old students over the course of the study, while the SIME/DIME study reported an 11% increase across ages (Hanushek 1986). MINCOME showed similar results (Forget 2011).

The RIME study also suggested that a negative income tax program may lead to overall improvements in school performance. In the North Carolina and Gary sites, children in the treatment group tended to improve relative to children from other families, but this improvement seemed to have been limited to the lower grades. The North Carolina data also showed increases in the level of education attainment, as well as a 30% reduction in absenteeism (Hanushek 1986).

Current Minimum Income Pilots

Contemporary minimum income pilot studies in high income countries have been framed as a response to globalization, automation, declining wages, and underemployment.⁶² They are touted as a means of addressing waning demand for labor and a mechanism for encouraging entrepreneurship. Five different guaranteed minimum income and universal basic income pilots are currently being tested or are in the planning phase. These experiments intend to supplement rather than supplant households' earned incomes. Findings from these studies were not available at the time of this report's publication.

Canada: Canada is preparing to launch two universal basic income pilots in Ontario and Prince Edward Island. The programs will test whether a guaranteed basic income would be an efficient way of delivering income supports and its effects on labor force attachment, health, and housing. However, details on the pilot experiments' design have not been released. A public comment period solicited views on the pilot's design (Government of Ontario 2016). Some early reports suggest that the pilot program will provide a guaranteed minimum income, supplementing the earnings of individuals whose incomes fall below a specific threshold (McFarland 2016).

Finland: Finland began a basic income experiment in January 2017. The study provides 2,000 randomly selected unemployed participants with €560 per month (about \$670) for two years (Sofocleous 2017). The monthly benefit, which replaces existing social benefits, is not reduced if their income from other sources rises or if they become employed. It seeks to determine whether basic income effectively reduces the perceived perverse incentives associated with means-tested benefits. The Finnish government is also interested in testing if a basic income would reduce poverty and unemployment (Henley 2017). However, its small sample size combined with a lack of interest from the political party now in control of the national government may work to undermine the experiment's viability (Jauhiainen and Mäkinen 2017).

Netherlands: In May 2017, the City of Utrecht launched a pilot guaranteed basic income program. The experiment offers cash payments to current welfare clients and aims to discover if a social safety net program with fewer rules encourages recipients to participate in society or secure employment or impacts their health and well-being (City of Utrecht 2017). People in the experiment will receive a basic monthly income of €970 (about \$1,024) under slightly different conditions. The control group will receive the sum under current social assistance rules; the second group will receive the sum with an obligation to seek work but will be allowed to keep a portion of the benefit when employed; the third group will have get a payment that is not conditional on their employment search; and the fourth group will receive a bonus of €125 (about \$148) if they volunteer for community service (Henley 2017).

Oakland, California: Y-Combinator, a startup incubator for technology companies in Silicon Valley, recently announced that it would conduct its own basic income pilot. The company's non-profit research lab plans to spend \$1.5 million over the course of a year to study the distribution of \$1,000 to \$2,000 per month to 30 to 50 people in Oakland, California (Altman 2017). Y-Combinator plans to continue its research with a full-scale, follow-up experiment with approximately 4,000 individuals across two U.S. states who will be randomly assigned to a control group or a treatment group. Individuals in the treatment group will receive \$1,000 per month for three to five years. The researchers seek to examine the effects of a basic income on time use; physical fitness, healthy behaviors, and health outcomes; financial security; risk preference; political and social behaviors and attitudes; crime; and child well-being (Y-Combinator Research 2017).

Stockton, California: The City of Stockton is launching an experimental universal basic income program which will provide an unconditional, \$500 monthly cash transfer to several hundred residents. The Stockton Economic Empowerment Demonstration (SEED) is still in the early planning stages, and so the details of who will receive the payments and how long they will continue have not been released yet. The study is expected to cost about \$1.2 million, which will be paid for by an outside organization called the Economic Security Project (Stockton Economic Empowerment Demonstration 2018, Economic Security Project 2018).

Appendix 4: Refundable Tax Credits

Appendix 4 supplements the analysis of refundable and nonrefundable tax credits discussed in **Section 1.2**. While benefit programs require the government to spend money, tax expenditures reduce the amount of money the government collects in tax revenues. Tax expenditures are provided to individuals and businesses in the form of income tax deductions, exclusions, credits, deferrals, and preferential tax rates. They can be used to incentivize certain economic activity behavior, such as purchasing a home or saving for retirement, by lowering the taxable cost of engaging in these behaviors. The budget process tends to treat tax expenditures as reductions in taxes as opposed to increases in spending, and therefore they tend to enjoy broader political support. Nevertheless, they can have a significant impact on the allocation of public resources. Some observers criticize the practice of providing benefits through tax expenditures, because it can give a false appearance of reducing the size of the government and remain largely invisible to policymakers and citizens (Tax Policy Center 2016, Burman and Phaup 2012, Cole 2014). The Office of Management and Budget (OMB) expects that FY 2018 federal tax expenditures will top \$1.5 trillion including outlay effects, which is more than double the U.S. Department of Defense’s total requested budget of \$639.1 billion (Tax Policy Center 2016, U.S. Department of Defense 2017). The U.S. Treasury Department projected that income security programs, which are the focus of this report, will make up 15.5% of federal tax expenditures in FY 2018 (Tax Policy Center 2016).

Also known as negative income taxes, refundable tax credits can be used to establish a minimum income program. Nonrefundable and refundable tax credits both decrease the filer’s tax bill, but only refundable tax credits offers a cash payment for any excess value. They create the possibility of negative federal tax liability, meaning that a taxpayer receives a transfer from the government (Cole 2014). **Table 25** and **Table 26** show the District’s local funds investment in refundable tax credits.

Table 25: Average Refundable Local Tax Credits Provided to Low-Income Filers in D.C., 2014

Household Size	Federal Poverty Level, 2014	# of D.C. Filers Below Federal Poverty Level*	Average AGI of D.C. Filers Below Poverty Level†	Average D.C. Refundable Tax Credit Received
1	\$11,670	36,563	\$5,409	\$223
2	\$15,730	6,606	\$9,828	\$1,239
3	\$19,790	4,225	\$13,635	\$1,988
4	\$23,850	855	\$14,782	\$1,926
5 +	\$27,910+	234	\$18,675	\$1,677

*Households with D.C. AGI and earned income below the Federal Poverty Level and investment income less than \$3,350.

†Households with negative D.C. AGI are assigned zero DC AGI for this calculation.

Table 26: District of Columbia Tax Expenditures, 2017

D.C. Refundable Tax Credit	FY17 Tax Expenditure
DC Earned Income Tax Credit	\$66,543,000
DC Child and Dependent Care	\$12,078,000
Schedule H Homeowner and Renter Property Tax Credit	\$16,373,000

Refundable tax credits such as the EITC can be explained through a grocery store coupon analogy. If a grocery store issued a \$5 *nonrefundable* coupon for a sack of rice, a shopper buying a \$3 sack of rice would get the sack for free but lose out on the excess \$2 of the coupon’s value. However, if the \$5 rice coupon was *refundable*, a shopper who presented the coupon for a \$3 sack of rice would get the rice for free plus \$2 in cash.

Earned Income Tax Credit (EITC)

Only tax filers who are U.S. citizens, earned income during the tax year, and are between the ages of 25 and 64 are eligible for the EITC. Its value depends on several factors, including the filer’s earned income, marital status, and the number of minor children they claim as dependents. The EITC strongly favors households with minor children, as shown in **Table 27** Error! Reference source not found. and **Figure 15**. For example, the 2017 tax year allows for a maximum EITC of \$6,318 to households with children compared to \$510 for households without children (Internal Revenue Service 2016a). Households must file a tax return and claim an EITC tax credit to receive the benefit, even if their income is below the tax-filing requirement. More than 27 million people nationwide received \$67 billion in federal EITC outlays in tax year 2016, making for an average tax refund of \$2,455.

Table 27: Federal Earned Income Tax Credit (EITC), 2017 Tax Year

Federal EITC Benefits – Single or Widowed Head of Household						
	Phase-In Rate	Phase-In Ends	Phase-Out Threshold	Phase-Out Rate	Phase-Out Ends	Maximum EITC Credit
Childless	7.65%	\$6,670	\$8,340	7.65%	\$15,010	\$510
1 Child	34%	\$10,000	\$18,340	16%	\$39,617	\$3,400
2 Children	40%	\$14,040	\$18,340	21%	\$45,007	\$5,616
3+ Children	45%	\$14,040	\$18,340	21%	\$48,340	\$6,318
Federal EITC Benefits – Married Filing Jointly						
	Phase-In Rate	Phase-In Ends	Phase-Out Threshold	Phase-Out Rate	Phase-Out Ends	Maximum EITC Credit
Childless	7.65%	\$6,670	\$13,930	7.65%	\$20,600	\$510
1 Child	34%	\$10,000	\$23,930	16%	\$45,207	\$3,400
2 Children	40%	\$14,040	\$23,930	21%	\$50,597	\$5,616
3+ Children	45%	\$14,040	\$23,930	21%	\$53,930	\$6,318

Figure 15: Federal Earned Income Tax Credit (EITC), 2017 Tax Year



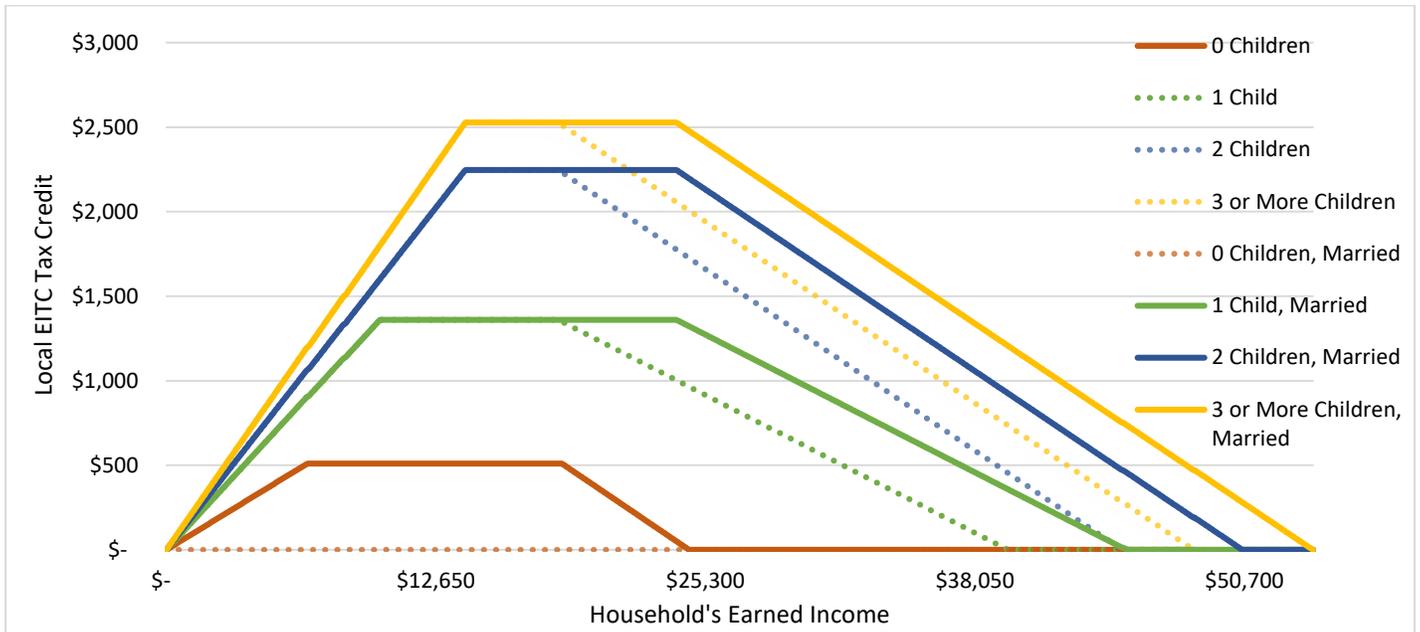
The District and 25 states have created their own, locally-funded EITCs. Virginia and Maryland both offer a local EITC, and Montgomery County offers an additional 100% of the state refundable EITC. The District’s EITC is among the nation’s most generous state-funded EITCs (Hathaway 2017, D.C. Office of the Chief Financial Officer 2016a). The District provides tax filers with children who qualify for the federal EITC with a supplemental, locally-funded EITC worth 40% of the value of their federal EITC (see **Table 28** and **Figure 16**).⁶³ Consequently, a single parent in the District with two children working full-time at the jurisdiction’s minimum hourly wage of \$13.50 would see their income boosted to \$15.20 per hour by the federal EITC and \$15.89 per hour when combined with the local EITC. In other words, the federal EITC raises this single parent’s annual income from \$28,050 to \$31,615, and the local EITC boosts it to \$33,041. Unlike the federal EITC, the District’s tax credit can be claimed by non-custodial parents if they comply with court ordered child support.

The District’s local EITC also matches 100% of the federal EITC for tax filers without children and provides credits for filers with higher incomes. While childless adults cannot qualify for the federal EITC if their incomes exceed \$15,010, they are eligible for the local EITC if their annual income falls below \$24,593. Regardless of income, the District does not allow married, childless couples to receive the local EITC (D.C. Office of the Chief Financial Officer 2016).

Table 28: District EITC, 2017 Tax Year (estimated)

D.C. EITC Benefits – Single or Widowed Head of Household						
	Phase-In Rate	Phase-In Ends	Phase-Out Threshold	Phase-Out Rate	Phase-Out Ends	Maximum EITC Credit
Childless	7.65%	\$6,670	\$8,340	8.48%	\$24,593	\$510
1 Child	34%	\$10,000	\$18,340	16%	\$39,617	\$1,369
2 Children	40%	\$14,040	\$18,340	21%	\$45,007	\$2,246
3+ Children	45%	\$14,040	\$18,340	21%	\$48,340	\$2,527
D.C.7, EITC Benefits – Married Filing Jointly						
	Phase-In Rate	Phase-In Ends	Phase-Out Threshold	Phase-Out Rate	Phase-Out Ends	Maximum EITC Credit
Childless					\$0	\$0
1 Child	34%	\$10,000	\$23,930	16%	\$45,207	\$1,360
2 Children	40%	\$14,040	\$23,930	21%	\$50,597	\$2,246
3+ Children	45%	\$14,040	\$23,930	21%	\$53,930	\$2,527

Figure 16: District of Columbia EITC, 2017 Tax Year (estimated)



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Notes

¹ Fair Shot Minimum Wage Amendment Act of 2016, effective August 19, 2016, (D.C. Law 21-144; 63 DCR 11135).

² 25.8% of District residents living below the poverty line are below age 18, 56.4% are female, 82.5% are non-white, and 56.5% have a high school degree or less. In contrast, in the District's population overall, 18.1% are younger than 18, 42.6% are female, 60% are non-white, and 27.5% have a high school degree or less.

³ "Fair Shot Minimum Wage Amendment Act of 2016," effective August 19, 2016 (D.C. Law 21-144; 63 DCR 11135).

⁴ The majority of anti-poverty programs in the U.S. are in-kind transfers, providing services or vouchers that can only be redeemed for specified goods, such as housing or groceries, rather than cash. SNAP vouchers can only be used to purchase food products that are not pre-prepared. The voucher cannot be redeemed for any other basic necessity besides food, such as toilet paper, soap, or medications. Common criticisms of voucher-based systems like SNAP are concerned with their paternalistic nature, that they do not give households the ability to make decisions about their most pressing expenditures, and that they are often more expensive to administer than a similarly-valued cash transfer. For these reasons, in-kind transfers are viewed by some economists as less efficient at alleviating poverty than cash transfers (Cunha 2014, Margolies and Hoddinott 2015, Aker 2013, Lleras-Muney 2018). However, in-kind transfers are generally considered effective at increasing consumption of the goods that they subsidize and targeting resources at certain members of a household, such as children (Bruce and Waldman 1991, Nichols and Zeckhauser 1982, Leroy, et al. 2010).

⁵ In 2017, Hawaii's state legislature unanimously passed a new law officially recognizing that all families in the state "deserve basic financial security" and requires several state agencies and offices to "identify and analyze options to ensure economic security, including a partial universal basic income, full universal basic income and other mechanisms" (Patton 2017).

⁶ In 2015, the Fund provided every resident with a record high dividend of \$2,072 but has fallen since as oil prices have declined (Alaska Department of Revenue 2017).

⁷ The study assumes that adults in the model household are 25 years old, although the 2015 ACS indicates that individuals from age 18 to 24 are most representative of adults with incomes below the Federal Poverty Level in the District. The study used age 25 so that the head of households would qualify for the federal and local EITC. To calculate child care costs for children not eligible for the District's universal pre-K program, the Budget Office assumed that the first child is two years old. The study decided to make the second fictional child 9 years old, which is consistent with assumptions made by the LWC and FBC calculators (see [Appendix 1](#)).

⁸ To understand what a minimum income program would mean for the District, the Budget Office selected three different household types that are most representative of households living in poverty in the District: single adults, single adults with one dependent child, and single adults with two dependent children. According to the 2015 American Community Survey, the majority (58.5%) of District households living below the Federal Poverty Level were individuals living alone or nonfamily members who reside together, such as roommates or boarders. Families represented 35.5% of all District households below the FPL. "Non-family households" and single parent-headed households with two to four members were most representative of District households with incomes below the poverty level.

⁹ The weighted average for two and three person households was adjusted downward by \$285 and \$878, respectively, to meet TANF's income eligibility threshold at time of initial application.

¹⁰ Eligibility for other public cash benefit programs are limited to populations that are unable to work or have significant barriers to employment, including senior citizens, those with permanent physical or mental disabilities, widows and widowers over the age of 50, and children under the age of 18 who have lost a parent. These programs, respectively, are: Social Security Retirement Benefits; the federally-funded Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) and the locally-funded Interim Disability Assistance; and Social Security Survivors Benefits. People who have recently been laid off from their job may qualify for time-limited Unemployment Insurance cash assistance.

¹¹ Like most states, the District of Columbia's maximum TANF benefit is less than 30% of the Federal Poverty Level (Floyd 2017).

¹² For example, to qualify for the District’s TANF benefits in fiscal year 2018, a four-person household could not have an annual income above \$10,356. The maximum annual TANF benefit available to four-person District households is \$8,436 (D.C. Department of Human Services 2017a). However, the 2017 federal poverty threshold for a four-person household was \$24,600 (U.S. Department of Health and Human Services 2017).

¹³ In contrast, a survey of TANF customers in the District conducted by the DHS found that only 2% self-reported as having less than a high school degree (D.C. Department of Human Services 2016).

¹⁴ The Federal Insurance Contributions Act (FICA) is a federal law that requires paycheck withholdings of 6.2% for Social Security and 1.45% for Medicare. This report assumes that the three fictional household heads are directly employed. If they worked as independent contractors, they would be subject to a 15.3% FICA self-employment tax rate (Internal Revenue Service 2017b).

¹⁵ The FBC uses the National Bureau of Economic Research’s Internet TAXSIM program to estimate tax payments. The MWC calculates the federal income tax rate as a percentage of total income based on the average tax paid by median-income four-person families as reported by the Tax Policy Center of the Urban Institute and Brookings Institution for 2014 (see **Appendix 1**).

¹⁶ Households must file a tax return and claim an EITC tax credit to receive the benefit, even if their income is below the tax-filing requirement.

¹⁷ Budget Office’s calculation based on a 28.1% non-participation rate and an average EITC tax credit of \$2,336.

¹⁸ Prior to the passage of the “Tax Cuts and Jobs Act of 2017,” the Child Tax Credit was split into a refundable and non-refundable portion. The refundable portion, which was called the Additional Child Tax Credit was only available to tax filers with earned incomes of at least \$3,000 who did not owe any federal income tax (Internal Revenue Service 2016). The “Tax Cuts and Jobs Act of 2017” raised the Child Tax Credit from \$1,000 to \$2,000. It now refunds 15% of the filer’s earned income which exceeds \$2,500 up to a maximum credit of \$1,400 per child. This predicted outlay was for tax year 2017, when the maximum Child Tax Credit was worth \$1,000.

¹⁹ Also, the federal Premium Tax Credit, which is a refundable tax credit that helps low and moderate-income afford health insurance through state-based health insurance exchanges. In 2017, federal outlays for this tax credit are anticipated to be \$32.24 billion (U.S. Department of the Treasury 2017).

²⁰ D.C. Official Code § 47-1806.06

²¹ Tania Slocum could get up to \$1,000 in Schedule H tax credits. However, to qualify for the maximum credit, she would have to have enough salary and wage income to pay Fair Market Rent for an efficiency apartment. This report assumes that she earns \$11,192 less per year than an efficiency’s annual Fair Market Rent.

²² “Standard-quality” rental units are on 10 acres or less, have full plumbing, and a full kitchen. The unit must be more than two years old and must not include meals.

²³ Most metropolitan areas use the 40th percentile FMR. To ensure that HCVP voucher holders have access to at least half of all available units in their housing market, a George W. Bush-era HUD rule first made the Washington, DC metropolitan area and approximately 40 other metropolitan areas subject to the 50th percentile FMR (U.S. Department of Housing and Urban Development 2000, 2001).

²⁴ Most households living in the District’s public housing units rely on other forms of public assistance to survive, for example 80% use SNAP. Despite the housing subsidy they receive, more than a third of the households struggled to pay rent on time in the past year (Urban Institute 2017).

²⁵ An Obama-era HUD rule set to take effect in 2018 will likely alter the value of HCVP vouchers in many cities around the country, but it will not directly impact vouchers issued in the District. The rule changes the geographic area used to calculate FMRs in 24 locations around the country. The Obama administration selected these areas because they have a wide variance in rents, and their HCVP voucher holders are concentrated in a few high-poverty neighborhoods. FMRs will be replaced by a “Small Area Fair Market Rent” (SFMR) approach, which calculates the standard rental payment on a zip code-based level. (U.S. Department of Housing and Urban Development 2016, 2016a). HUD Secretary Ben Carson intended to suspend SFMR designations (U.S. Department of Housing and Urban Development 2017b). A coalition of civil rights filed suit, and in December 2017, the U.S. District Court sided with the plaintiff and blocked the rule’s delay. At the time of this report’s publication, it was unclear if the Trump administration would appeal Chief Judge Beryl A. Howell’s ruling (Jan 2017, Nelson 2018).

²⁶ The DHCD recommends an income of at least \$18,300 to qualify for an affordable housing unit that is subsidized at 30% of median family income (MFI). Tania Slocum is assumed to have an annual earned income of \$4,903.

²⁷ As of February 2017, the waiting list for public housing included 27,484 names; 39,440 waited for a Housing Choice Voucher from the tenant-based program; and 22,405 waited for a Housing Choice Voucher from the Moderate Rehabilitation Project-Based programs. The DCHA's waiting list would be longer but for the fact that it is currently closed and has been since April 2013 and purged (D.C. Housing Authority 2017). As of April 2013, a resident seeking a one-bedroom apartment could expect to wait 28 years for a placement (DeBonis 2014).

²⁸ The District is tied for first with Hawaii, Iowa, Oregon, Pennsylvania, Rhode Island, and Vermont.

²⁹ The FBC also based its estimate of the cost of health insurance on lowest-cost bronze plan in the rating area, adjusted for family size, age of user, and tobacco surcharge; and it applied data gathered by the Medical Expenditure Panel Survey to estimate out-of-pocket costs. The LWC based its estimate of healthcare costs on Medical Expenditure Panel Survey data.

³⁰ Although individuals with incomes less than 210% of the Federal Poverty Level and children in households with incomes less than 319% of the Federal Poverty Level can qualify for Medicaid in the District of Columbia, this report assumes that households earning enough money to cover their basic expenses and would not use Medicaid. This report also does not include the value of employer contributions to health insurance premiums, since the majority (78%) of low-wage workers in the U.S. do not have access to employer-provided medical insurance (U.S. Bureau of Labor Statistics 2016).

³¹ The District reduces its local costs by taking advantage of the Federal Medical Assistance Percentage (FMAP), which is the term for the federal share of payments under Medicaid. The District's FMAP is 70%, which means that for every \$1.00 the District spends, the federal government provides a \$2.33 match.

³² Children below age 18 and pregnant women can qualify for Medicaid coverage if their incomes fall at or below 324% of the Federal Poverty Level (including a 5% income disregard). Parents and caretakers of an eligible child, childless adults, young adults between the ages of 18 and 20, the elderly, blind, and disabled can also qualify for Medicaid at different income and asset thresholds.

³³ The same organization estimated that home-based care in the District costs 23% to 38% less than center-based costs.

³⁴ The FBC and LWC's child care calculations are also built upon data on average annual costs for home-based and center-based child care by state published by Child Care Aware of America.

³⁵ The summer camp estimate includes eight weeks of summer camp for \$800, plus \$80 in field trip fees and \$160 for before and after care.

³⁶ The value of these subsidies is based on what is the average cost of childcare in the District and the cost of DPR summer camp without an income-based discount applied.

³⁷ This report defined food deserts as areas that are not within a 0.5-mile walking distance to a grocery store supermarket, more than 40% of households in the area do not have access to a vehicle, and the area median income is less than 185% of the Federal Poverty Level.

³⁸ The predicted food costs are shaped by several factors, including the subject's age, gender, and household size (U.S. Department of Agriculture 2017b). The USDA built its Low-Cost Food Plan assuming that households would waste less food and have fewer food choices than more expensive food baskets (Carlson, et al. 2007). The FBC and LWC also use the USDA's Low-Cost Food Plan to estimate food costs in their models.

³⁹ SNAP benefits cannot be used to purchase prepared foods, liquor, or nonfood items, such as paper products.

⁴⁰ This assumes that Alicia DeRussy and Ralph McNair receive housing and childcare subsidies and that all three households have savings of \$500.

⁴¹ Many SNAP recipients receive an additional \$20.01 per month in SNAP benefits through the "Heat and Eat" program. The supplemental benefit is available to households who do not pay heating or cooling expenses and do not receive Low Income Energy Assistance (LIHEAP) energy assistance. This nutrition benefit is funded through LIHEAP and serves approximately 77,000 District residents (D.C. Department of Energy and Environment 2017). None of the fictional households being considered by this study would be eligible for "Heat and Eat" benefits.

⁴² The cost of providing these meals at home may differ from the cost to the school system of providing equivalent food service. Therefore, this study estimates the value of the free school breakfast and lunches based on calculations derived from the USDA's Low-Cost Food Plan as opposed to the amount that the school system spends per meal.

⁴³ Since a substantial share of households in the District do not own a car, the authors of this report decided not to include the cost of car ownership in their basic cost of living calculation. The American Community Survey revealed that 36.4% of District households do not own a vehicle, and the majority (65.4%) of workers in the District do not commute by car. Public transit is the most common (37.8%) way for District residents to get to work, while 11.7% of people walk, 5.8% carpool, 5.3% travel by taxi or rode a motorcycle, and 4.8% work from home (U.S. Census Bureau 2017). Nevertheless, it is also true that households with lower incomes are more likely to live in areas of the District where it is more difficult to live without a car than households with higher incomes (Smith 2017a).

⁴⁴ To estimate transportation costs, the FBC assumes that households are car-dependent while acknowledging that estimated costs might be overstated in areas with broad public transportation networks. The FBC uses the 2009 National Household Transportation Survey to estimate households' driving habits and applies the Internal Revenue Service's 2013 standard mileage rate of 56 cents per mile driven (U.S. Department of Transportation 2009, Internal Revenue Service 2013). In contrast, the LWC leverages the 2015 Consumer Expenditure Survey to estimate transportation expenses and includes vehicle purchases; gasoline; motor oil and other maintenance expenses; and public transit fares.

⁴⁵ Fiscal Year 2018 Budget Support Act of 2017, effective December 13, 2017 (D.C. Law 22-33; 64 DCRA 12875).

⁴⁶ Chicago and Buffalo hosted nonprofit car sharing services that offered relatively affordable rentals, but for-profit car sharing services acquired them (Gottlieb 2015, Badger 2013, Drury 2015). At the time of this report's publication, the authors could find no evidence that a nonprofit car sharing service operated in the District.

⁴⁷ This report does not estimate water and sewer charges. The 2013 American Housing Survey reports that 22% of renter-occupied housing units in U.S. central cities were charged separately for water monthly in 2013 (U.S. Census Bureau 2013).

⁴⁸ Estimating utility costs for the three fictional families requires making assumptions about their energy, gas, and water usage. This report assumes that all three households use electricity as the energy source for both heating and cooling, and that average monthly electricity bills are approximately \$50 per month for an efficiency and \$75 per month for a one- or two-bedroom apartment. The report also assumes that Tania Slocum, Alicia DeRussy, and Ralph McNair's apartments are equipped with natural gas-powered cooking ranges, and that their average monthly gas bills are \$15 per month. In deriving these cost estimates, the authors of this report relied on published estimates of nationwide and District-specific average utility costs and drew upon the authors of this report's personal experience living in the District (Zillow 2012). Tania Slocum, Alicia DeRussy, and Ralph McNair's cellular phone expenses are based on the Bureau of Labor Statistic's Consumer Expenditure's inflation adjusted estimate of mean cellular phone service expenditures by household composition (U.S. Bureau of Labor Statistics 2017, 2017a). Approximately 95% of American adults were reported to own a mobile phone, and a majority of American homes only have mobile telephone service (Pew Research Center 2017, Blumberg and Luke 2017). Broadband Internet expenses apply an inflation adjusted estimate from Open Technology Institute's survey of the average cost of broadband service in Washington, DC (Russo, et al. 2014). Roughly 77% of U.S. households have a broadband Internet subscription, including most households that earn less than \$25,000 per year (Ryan and Lewis 2017). However, the share of adults with broadband Internet access in their home is lower in the District than all but 28 other U.S. counties (Malone 2017).

⁴⁹ The Budget Office was unable to estimate the value of the RES discount by the time of the report's publication. For this reason, the value of a RES discount is not included in this report's calculation of the value of social safety net benefits.

⁵⁰ The HCVP makes conservative assumptions about energy and water usage and will not subsidize what is deemed to be excessive energy and water consumption. This report does not consider if the DeRussy and McNairs' estimated utility usage is in line with what HCVP will reimburse.

⁵¹ “Housekeeping supplies” includes laundry and cleaning supplies, cleaning and toilet tissues, stationery supplies, postage, delivery services, miscellaneous household products, and lawn and garden supplies. “Personal care products and services” includes products for the hair, oral hygiene products, shaving needs, cosmetics and bath products, electric personal care appliances, other personal care products, and personal care services for males and females. “Education” includes tuition; fees; and textbooks, supplies, and equipment for public and private nursery schools, elementary and high schools, colleges and universities, and other schools. And “miscellaneous” includes safety deposit box rental, checking account fees and other bank service charges, credit card memberships, legal fees, accounting fees, funerals, cemetery lots, union dues, occupational expenses, expenses for other properties, and finance charges other than those for mortgages and vehicles (U.S. Bureau of Labor Statistics 2017b).

⁵² The FBC and LWC both use the Consumer Expenditures Survey to estimate the cost of apparel and services, housekeeping supplies, personal care products and services, reading matter, and miscellaneous other necessities. The FBC also considers entertainment, household furnishings and equipment, household operations, telephone services, and school supplies to be necessities. The FBC uses 2013 consumer expenditure data for the second quintile of income before taxes to estimate the cost of other necessities as a share of food (at home) and shelter costs for all consumer units, which is approximately 48%. This percentage is then applied to estimates food and housing cost for households of varying sizes. The LWC estimate relies on 2014 survey data that is adjusted for regional differences and inflated from 2015 to 2016 dollars using the Consumer Price Index inflation. As a share of food and housing costs, the LWC estimates range from 13 to 20%.

⁵³ A basic income equal to 300% of the Federal Poverty Level might also make District residents ineligible for most federal, means-tested benefits including the Supplemental Nutrition Assistance Program (SNAP); Women Infants, and Children Program (WIC); Free and Reduced Meal Program; Temporary Assistance for Needy Families (TANF); Earned Income Tax Credit (EITC); Housing Choice Voucher Program (Section 8); certain Medicaid benefits; and Pell Grants. While federal means-tested programs generally do not count food stamp benefits, welfare payments, EITC refunds, and Medicaid benefits as categories of income, some Social Security payments, paid leave benefits, and Unemployment Insurance benefits do count towards the earned income threshold. The authors of this report were unable to determine if a District-provided minimum income or universal basic income payment would be treated by the federal government as a welfare benefit or earned income for the purposes of calculating a household’s income eligibility for means-tested programs.

⁵⁴ According to REMI, personal taxes and transfer payments both change disposable personal income in the model, but only a change to personal taxes affects the migration equation. Increasing personal taxes will reduce disposable personal income and make the region less attractive to economic migrants via the real relative wage rate, (thereby decreasing population and labor supply and weakening consumption). In contrast, increasing transfer payments only feeds into disposable personal income (which stimulates consumption), and does not have a corresponding impact on economic migration. For this reason, the model treats the effect of raising personal taxes as outweighing an equivalent increase in transfer payments.

⁵⁵ Real disposable income in the region equals personal income adjusted for taxes and the price index, which represents the cost of living (Regional Economic Models, Inc. 2016).

⁵⁶ REMI PI+ does not allow the user to model an increase in personal income taxes that would only apply to high-income households, nor is PI+ able to capture differences in the application of an increase in the personal income tax associated with the marginal propensity to consume.

⁵⁷ The Budget Office estimated the cost of each iteration of the minimum income program (Simulations 1-4) using data on District household size and income distribution that was obtained from the IPUMS-USA application. This application allows the user to query American Community Survey and federal census sample data from 2000-2012.

⁵⁸ The residence adjustment for employment is calculated using commuter employment and income data (Regional Economic Models, Inc. 2016).

⁵⁹ Total private sector employment in the District was 541,000 in 2016 (D.C. Office of the Chief Financial Officer 2017a).

⁶⁰ The sources of model uncertainty fall in to three general categories: 1) Uncertainty and potential error with respect to the structure of the model, and its ability to accurately simulate the dynamics of the regional economy;

2) Uncertainty in estimates of structural economic parameters; and 3) Uncertainty in the forecasts of economic variables needed to drive the model (Giarratani and Houston 1991).

⁶¹ MINCOME's health-related analysis is limited to the Dauphin site, due to limitations in the Winnipeg data collection.

⁶² This report does not consider the range of pilot programs being tested in middle and lower income countries out of concern that their results may not be as directly applicable to the U.S. context as experiments happening in high income countries. Consequently, this report does not discuss pilot programs taking place in India, Kenya, and Uganda.

⁶³ Earned Income Tax Credit of 2001, effective September 6, 2001, (D.C. Law 14-22; 48 DCR 5751); Fiscal Year 2015 Budget Support Act of 2014, effective February 26, 2015, (D.C. Law 20-155; 62 DCR 3601).